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The University Of Oklahoma, 620 Parrington Oval, Room 208
OK 73019, USA
6 (bases 1 to 98557)
Submitted (03-FEB-2000) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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                                                                                                                                                                                                                                     18 GAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGAC
ATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCC
                                                         CAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGC
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                                                                                                                                                                                                                                                                                           415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 On Mar 12, 2000 this sequence version replaced gi:6958024.

Because these overlapping clones came from different libraries there are numerous instances of insertions, deletions, and single nucleotide polymorphisms in the overlapping regions below.

AC008132(pac99506) 136107 145670 (0) overlaps AC008103(pac699j1) 1 9556 (89001) AC007981(b291) 132871 175358 (0) overlaps AC008103(pac699j1) 1 44355 (34202) AC007325(b48) 71505 165050 (0) overlaps AC008103(pac699j1) 1 44355 (34202) AC007325(b48) 71505 165050 (0) overlaps AC008103(pac699j1) 1 94144 (4413) AC008103(pac699j1) 56194 98557 (0) overlaps AC007326(p423) 1 42365 (60533).
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Submitted (27-MAY-2000) Department Of Chemistry
The University Of Oklahoma, 620 Parrington Oval,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wang, Q., Fang, F., Fu, Y., Pan, H., Edelmann, L. and Direct Submission
Submitted (05-FEB-2000) Department Of Chemistry P
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10 (bases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (10-FEB-2000) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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Direct Submission
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                                                                                                                                                                                         OK /3013, vo...
5 (bases 1 to 106650)
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2han,M. and Roe,B.A.
Direct Submission
Submitted (31-MAY-2000) Department Of Chemistry And Biochemistry,
Submitted (31-MAY-2000) Department Of Chemistry And Room 208, Norman
                                                                 OR 73019, USA
ON Sep 25, 1999 this sequence version replaced gi:5919292.
On Sep 25, 1999 this sequence version replaced gi:5919292.
Because these overlapping clones came from different libraries there are numerous instances of insertions, deletions, and single nucleotide polymorphisms in the overlapping regions below.
AC008018(b379n11) 146090 180888 (0) overlaps AC007708(b563b9) 1
34927 (71723) AC007708(b563b9) 1843 106650 (0) overlaps
AC009288(p413m7) 1 101851 (39025).
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3 (bases 1 to 106650)

Zhan, M. and Roe, B.A.

Direct Submission
Submitted (25-SEP-1999) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                   Direct Submission
Submitted (13-MAY-2000) Dep
The University Of Oklahoma,
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Hua,A., Emanuel,B. and Roe,B.A.
Direct Submission
Submitted (19-NOV-1999) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
                                                                         OK 73019, USA 3 (bases 1 to 140876)
                                                                                                         Submitted (13-AUG-1999) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
                                                                                                                                               2 (bases 1 to 140876)
Hua,A., Emanuel,B. and Roe,B.A.
Direct Submission
                                                                                                                                                                                      Unpublished
2 (bases 1
                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 140876)
                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens chromosome 22q11 clone AC009288
                                                                                                                                                                                                                                        Hua, A., Emanuel, B. and Roe, B.A.
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5 (bases 1 to 140876)
Hua.A., Emanuel,B. and Roe,B.A.
Direct Submission
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Direct Submission

Submitted (13-MAY-2000) Department Of Chemistry And Biochemistry,

The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
                                                                                AC007981 175358 bp DNA linear PRI 27-M
Homo sapiens chromosome 22q11 clone b291, complete sequence.
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Eukaryota; Metazoa; Chordata; Craniata;

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(bases 1 to 175358)
8 (bases 1 to 175358)
Fu,Y., Pan,H., Shaikh,T., Kurahashi,H., Emanuel,B. and Roe,B.A.
Direct Submission
Direct Submission
Submitted (19-MAY-2000) Department Of Chemistry And Biochemistry,
Submitted (19-MAY-2000) Department Of Chemistry And Room 208, Norman,
                                                                                                                      OK 73019, USA
ON May 20, 2000 this sequence version replaced g1:7940350.

Because these overlapping clones came from different libraries there are numerous instances of insertions, deletions, and single nucleotide polymorphisms in the overlapping regions below.

AC008132(pac99506) 4747 145670 (0) overlaps AC007981(b291) 1 142425 (32936) AC007981(b291) 9901 175358 (0) overlaps AC007981(b291) 132871 175358 (0) overlaps

AC008103(pac699j1) 1 44355 (54202).
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5 (bases 1 to 175358)

5 (bases 1 to 175358)

Fu,Y., Pan,H., Shaikh,T., Kurahashi,H., Emanuel,B. and Roe,B.A.

Direct Submission

Submitted (15-JAN-2000) Department Of Chemistry And Biochemistry,

The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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4 (bases 1 to 175358)
4 (bases 1 to 175358)
Fu,Y., Pan,H., Shaikh,T., Kurahashi,H., Emanuel,B. and Roe,B.A.
Direct Submission
Submitted (12-JAN-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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Submitted (08-JAN-2000) Department Of Chemistry And Biochemistry
The University Of Oklahoma, 620 Parrington Oval, Room 208, Normal
                                                                                                                                                                                                                                                                                                                                    OK 73019, USA
10 (bases 1 to 175358)
10 (bases 1 to 175358)
Fu,Y., Pan, H., Shaikh,T., Kurahashi,H., Emanuel,B. and Roe,B.A.
Direct Submission
Submitted (27-MAY-2000) Department Of Chemistry And Biochemistry,
Submitted (27-MAY-2000) Department Of Chemistry And Biochemistry,
                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
Submitted (20-MAY-2000) Department Of Chemistry And Biochemistry. The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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Submitted (18-MAY-2000) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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Fu,Y., Pan,H., Shaikh,T., Kurahashi,H., Emanuel,B. and Roe,B.A.
Direct Submission
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                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="22q11"
/clone="b291"
                                                                                                          Location
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                                                                                                        Qualifiers
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AUTHORS
TITLE
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                                       3 (bases 1 to 180884)
Zhan,M. and Roe,B.A.
Direct Submission
Submitted (01-NOV-1999) Depai
The University Of Oklahoma, (OK 73019, USA
                                                                                                                                                                                                         2 (bases 1 to 180884)
Zhan,M. and Roe,B.A.
Direct Submission
Submitted (10-JUL-1999) Department Of Chemistry And Biochemistry,
Submitted (10-JUL-1999) Department Of Chemistry And Room 208, Norman,
4 (bases 1 to 180884)
Zhan, M. and Roe, B.A.
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                                                                 Department Of Chemistry And Biochemistry, oma, 620 Parrington Oval, Room 208, Norman
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b379n11, complete
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Qy 422 GGF       Db 103513 GGF	Qy 362 TAP   1   Db 103453 CAP	Qy 302 CAT     Db 103393 CAT	QY 242 CCA       Db 103333 CCA	Qy 182 CGC 	Qy 122 CGA 	Qy 65 CGC       Db 103153 CGC	Qy 5 CTA   1   pb 103093 CGA	Query Match Best Local S Matches 404	FEATURES SOURCE BASE COUNT ORIGIN	EFERENC AUTHOR TITLE JOURNA	JOURNAL S REFERENCE 5 AUTHORS L JOURNAL T
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                                                                                                                                                                                                                                                Martinsried, GERMANY
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de;
sequenced by BMFZ (Biomedical Research Center at the Charite,
Sequenced by BMFZ (Biomedical Research Center at the Charite,
Berlin/Germany) within the cDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2448 bp mRNA linear PRI 18-FEB-2000 HOMO Sapiens mRNA; cDNA DKFZp434C196 (from clone DKFZp434C196); partial cds.
AL133561
                                                                                                                                         Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059 Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de Further information about the clone and the sequencing project is available at http://www.mips.biochem.mpg.de/proj/cDNA/.
                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 2448)
                                                                                                                                                                                                                                                                                                                                                               Koehrer, K., Beyer, A., Mewes, H.W., Gassenhuber, J. and Wiemann, S Direct Submission
                                                                                                                                                                                                                 This clone (DKFZp434C196) is available at the RZPD in Berlin
                                                                                                                                                                                                                                    Genome Project.
                                                                                                                                                                                                                                                                                                                                               Submitted (15-DEC-1999) MIPS, Am Klopferspitz 18a, D-82152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AL133561.1 GI:6599133
/clone="DKFZp434C196"
/tissue_type="testis"
/clone_lib="434 (synonym: htes3). Vector pSport1; host
DH10B; sites NotI + SalI"
                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                           location/Qualifiers
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Homo sapiens chromosome 13 clone RPI1-341D18, PROGRESS ***, 13 unordered pieces.
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<1. .1744
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AUTHORS
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                  misc_feature
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Sequencing vector: plasmid; L08752; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 179028 bases at least 040
Consensus quality: 181067 bases at least 020
Consensus quality: 182019 bases at least 020
Insert size: 183390; sum-of-contigs
Insert size: 183390; sum-of-contigs
Ouality coverage: 4.32x in 020 bases; sum-of-contigs
Ouality coverage: 4.32x in 020 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * NOTE: This is a 'working draft' sequence. It currently consists of 13 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     submitted (20-JAN-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 15A, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On Aug 14, 2000 this sequence version replaced gi:9213941.
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1 (bases 1 to 184590)
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HTG; HTGS_PHASE1; HTGS_DRAFT.
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Center code: SC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: humquery@sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  as soon as it is available and the accession number will be preserved.
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36486 36585; gap off 100 bp
61227 61326; gap off 100 bp
61327 66046; contig of 24641 bp in length
61327 66046; contig of 24738 bp in length
86065 86164; gap off 100 bp
92535 92534; contig of 6370 bp in length
92535 92634; gap off 100 bp
92535 97280; contig of 4655 bp in length
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127858 140183: contic
140184 140283: gap of
140284 143272: contic
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157030 184590: contig of 27561 bp in length.
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         /organisma*Homo sapins*
/db_xref="taxon:9606"
/db_momesome="13"
/chromosome="13"
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/clone="RPII-341018"
1. .36485
                                                                                                                                                                                                                                                                 Location/Qualifiers
1. .184590
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contig of 12326 bp in length
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Best Local :
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                                                                                                                                           241 TCCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCCAGG 300
361 CTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACG
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61327. .8
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fragment_chain:2"
100618. .116404
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fragment_chain:1
clone_end:SP6
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1 39974 c 41941 g
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clone_end:T7
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127858. 140183
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fragment_chain:2"
157030. .184590
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fragment_chain:2"
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125036. .127757
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fragment_chain:2"
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fragment_chain:1"
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fragment_chain:1"
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Nobuyoshi Shimizu, Keio University, School of Medicine, Molecular Biology; 35 Shinanomachi, Shinjuku-ku, Tokyo 160-0016, Japan (E-mail:nshimizu@dmb.med.keio.ac.jp, Tel:81-3-3351-2370,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This is a complete sequence of the insert of KB1183D5 clone. The proximal adjacent clone is KB876E2 (Acc. #AP000551) with 379-bp overlapping.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human DNA sequence from clone KB1183D5 on chromosome 22q11.2 published Only in DataBase (1999) In press 2 (bases 1 to 157086)
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BAC library clone:KB1183D5.
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57. .3
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/rpt_family="L2"
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/db_xref="taxon:9606"
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                                                       4 (bases 1 to 150754)
Hu.P., Wu,H., Yang,L., Morrow,B.E. and Roe,B.A.
Direct Submission
Submitted (01-JUL-2000) Department of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
OK 73019, USA

5 (bases 1 to 150754)

Hu,P., Wu,H., Yang,L., Morrow,B.E. and Roe,B.A

Direct Submission
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Submitted (26-JUN-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
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Homo sapiens chromosome 22q11 clone unknown, complete sequence
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On Jul 21, 20
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6 (bases 1 to 150754)
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Pred. No. 1.5e-24;
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BAC library clone:KB1592A4. Homo sapiens AP000550.1 GI:5931536

Homo sapiens pre-pro-B cell cell\_line:FLEB14-14 DNA, clone\_lib:Keio

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Homo sapiens genomic DNA, chromosome 22q11.2, BCRL2 region, clone:KB1592A4.

PRI 01-OCT-1999

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/evidence=not_experimental { complement(333.5554) /rpt_family="L1" /evidence=not_experimental complement(55425625) /rpt_family="L1M1"	/rpc_ramity="(rAAA)n" /evidence=not_experimental complement(49635286) /rpt_family="L1"	<pre>/rpt_family="L1PA4" /evidence=not_experimental /6174637</pre>	/rpt_family="LTR16A" /evidence=not_experimental 42244591	/rpt_family="Alusx" /evidence=not_experimental complement(33103408)	/rpt_family="AluJb" /rpt_family="AluJb" /evidence=not_experimental 2578	complement(9331039) /rpt_family="L2" /rpt_family="L2" /reldence=not_experimental /oss	/rpt_family("3/002) /rpt_family("3/002) /evidence=not_experimental	/rpt_family="L2" /rpt_f	<pre>rpt_family="(FCCA)n" /evidence=not_experimental complement 717752)</pre>	/evidence=not_experimental	complement(572640) /rpt_family="MIR"	/rpt_family="LTR33" /rpt_family="LTR33" /rpt_family="LTR33" /evidence=not_experimental	/rPc_ramity="Alusg" /evidence=not_experimental complement(A)	/evidence=not_experimental complement(99. 399)	/maj="24q11.2" complement(190) /rot_family="Alus"	/clone_"KB1592A4" /clone_lib="Keio BAC library"	2 1 I	/organism="Homo Sablens" /db_xref="taxon:9606" /cell line="FLBB14-14"	ocation/Qualifiers	complete sequence of the insert of KB1592A4 clone. The acent clone is KB876E2 (Acc.#AP000551) with 1196-bp	Biology: 35 Shinanomachi, Shinjuky, Jones Indontale, Moranomachi (Binjuk), 160-0016, Japan (E-mall:nshintzu@dmb.med.keio.ac.jp, Tel:81-3-3351-2370, Fax:81-3-3551-2370	Submission  Submission  Led (22-SEP-1999) to the DDBJ/EMBL/GenBank databases.	1 to 150724)	Human DNA sequence from clone KB1592A4 on chromosome 22q11.2 Published Only in DataBase (1999) In press	Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Best Local Similarity 85.9%;
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84871 AGCGAGGACGCCCACGGCATCGCCAGCGAGGACGCCCAGGGCATCGCCAACGAG
                                                                                                                                                          84811 ATCGCCAACGAGGACGCCCACGGCCACGGCATCGCCACGGCATCGCCA
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                                                                                                                    255 AACGGGGACGCCCTCAGCTTCGCCAACGGGGACGCCCCAGGGCATCGCCAACGGG 314
                                                                                                                                                                                                 195 ATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCC 254
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                                                                                                                                                                                                                                                                                                                                                              78 ACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCC---GAGGACGCCATC 134
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15255. .15418
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/rpt_family="Alusg"
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TITLE
JOURNAL
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Best Local
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85111 GCCAACGAG 85119
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5 (bases 1 to 12364)
5 (bases 1 to 12364)
Fu, Y., Fang, F., Wang, Q., Pan, H., McDermid, H. and Roe, B.A.
Direct Submission
Submitted (18-MAY-2000) Department Of Chemistry And Biochemistry,
Submitted (18-MAY-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 122364)
Fu.Y., Fang.F., Wang.Q., Pan,H., McDermid,H. and Roe,B.A.
Direct Submission
Submitted (19-DEC-1999) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
(Kases 1 to 122364)
Fu.Y., Fang.F., Wang.Q., Pan,H., McDermid,H. and Roe,B.A.
Fu.Y., Fang.F., Wang.Q., Pan,H., McDermid,H. and Biochemistry,
Submitted (06-MAY-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 122364)

1 (pases 1, variantes); Pan, H., McDermid, H. and Roe, B.A.

1 (Fu,Y., Fang,F., Wang,Q., Pan,H., McDermid,H. and Roe,B.A.

1 (Homo sapiens Chromosome 22q11 BAC Clone b293 In CES Region Unpublished
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Homo sapiens chromosome 22q11 clone b293, complete sequence.
AC007324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (17-APR-1999) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                                                                                               OK 73019, USA
On May 18, 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   fu,Y., Fang,F., Wang,Q., Pan,H., McDermid,H. and Roe,B.A.
Direct Submission
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31795 a 28253 c 28482 g 33834 t
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                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                               2000 this sequence version replaced gi:7712128
                                                                                                                                                                              0; Mismatches 64;
                                                                                                                                                                                                Score 354.6; DB 9; Pred. No. 3.1e-24;
                                                                                                                                                                              Indels
                                                                                                                                                                                                                     Length 122364;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82928 GACGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCGCCAAGGAGGACGCC 82987
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                                                                                                                                                                                                                                                                                                                                            Birren, B., Linton, L., Nusbaum, C., Lander, E., Allen, N., Anderson, M., Baldwin, J., Barna, N., Beckerly, R., Boguslavkiy, L., Boukhgalter, B., Bardwin, J., Barna, N., Beckerly, R., Boguslavkiy, L., Boukhgalter, B., Brown, A., Castle, A., Colangelo, M., Collins, S., Collymore, A., Cocke, P., DeArellano, K., Dewar, K., Domino, M., Donelan, L., Doyle, M., Forreira, P., Fitzblugh, W., Forrest, C., Funke, R., Gage, D., Galagan, J., Gardyna, S., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., Lehoczky, J., Lieu, C., Locke, K., Macdonald, P., Marquis, N., McEwan, P., McGurk, A., McKernan, K., McLaughlin, J., Meldrim, J., Morrow, J., Naylor, J., Norman, C. H., O'Connor, T., O'Donnell, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Titreil, A., Vassilley, H., Vo, A., Wheeler, J., Wu, X., Wyman, D., Ye, W.J., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCAACGAG 83116
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCAGGGCCATCGCCAACGGG 314
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                                                                                                                 Submitted (09-NOV-1999) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Mar 12, 2000 this sequence version replaced 9::6479088. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997) http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 15950) Birren, B., Linton, L., Nusbaum, C. and Lander, E. Homo sapiens chromosome 11, clone RP11-278E23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens chromosome 11 clo
SEQUENCE, 13 unordered pieces.
                                                                                                                                                                                                                                                                                                                                 Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HTG; HTGS_PHASE1; HTGS_DRAFT.
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Web site: http://www~seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
                                                          Center: Whitehead Institute/ MIT Center for Genome Research Center code: WIBR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17960 26339; contig of 8980 bp in length
26940 27039; gap of 100 bp
27040 36269; contig of 9230 bp in length
36270 36369; gap of 100 bp
36370 48574; contig of 1205 bp in length
48575 48674; gap of 100 bp
48575 48674; gap of 100 bp
62316 62315; contig of 13641 bp in length
62316 62415; gap of 100 bp
62416 77458 7757
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center project Information Center project name: L2604 Center clone name: 278_E_23
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7051 9136: contig of 2086 bp in length
9137 9236: gap of 100 bp
9237 17859: contig of 8623 bp in length
17860 17959: gap of 100 hm
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1730 1829; gap of 100 bp
1830 3716; contig of 1887 bp in length
3717 3816; gap of 100 bp
3817 6950; contig of 3134 bp in length
6951 7050; gap of 100 bp
7051 9136; contig of 2086 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2316 62415: 3ap of 100 bp
2416 77457; contig of 15042 bp in length
7458 77557; gap of 100 bp
7558 96884; contig of 19327 bp in length
6885 96984: gap of 100 bp
6885 124230; contig of 27246 bp in length
4231 124330; gap of 100 bp
4331 159550; contig of 35220 bp in length
Location/Qualifiers
1 15650
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                                                                 /note="assembly_fragment"
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      /note="assembly_fragment"
18675. .62315
                                                                                                                                            note="assembly_fragment"
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                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 15950)
Birren,B., Linton,L., Nusbaum,C. and Lander,E.
Homo sapiens chromosome 11, clone RP11-278E23
                                                                                                                     Unpublished
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8 Birren, B., Linton, L., Nusbaum, C., Lander, E., Allen, N., Anderson, M., Saliren, B., Linton, L., Nusbaum, C., Lander, E., Allen, N., Anderson, M., Baldwin, J., Barna, N., Beckerly, R., Boguslavkiy, L., Boukhgalter, B., Barwin, J., Barna, N., Beckerly, R., Boguslavkiy, L., Boukhgalter, B., Barown, A., Castle, A., Colangelo, M., Coliins, S., Collymore, A., Cocke, P., DeArellano, K., Dewar, K., Domino, M., Donelan, L., Doyle, M., Ferreira, P., Fitzhugh, W., Forrest, C., Funke, R., Gage, D., Ferreira, P., Fitzhugh, W., Forrest, C., Hagos, B., Heaford, A., Horton, L., Galagan, J., Gardyna, S., Grant, G., Hagos, B., Heaford, A., Klein, J., Howland, J.C., Johnson, R., Johnson, R., Mann, L., Karatas, A., Klein, J., Hechoczky, J., Lieu, C., Locke, K., Macdonald, P., Marguis, N., McEwan, P., McGwran, K., McLaughlin, J., Meddrim, J., McEwan, P., McGwran, K., McLaughlin, J., Meddrim, J., McEwan, P., Naylor, J., Norman, C. H., O'Connor, T., O'Donnell, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Stange-Thomann, N., Stolanovic, N., Subramanian, A., Talamas, J., Tresfaye, S., Tirrell, A., Vassiliev, H., Vo, A., Wheeler, J., Wu, X., The Marguis, A., Talamas, J., The Marguis, A., The Marguis, A., Talamas, J., The Marguis, A., The Marguis, 
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All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)

http://ftp.genome.washington.edu/RM/RepeatMasker.html
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Center clone name: 278_E, 23

Center clone name: 278_E, 23

Sequencing vector: M13; M77815; 100% of reads chemistry: Dye-terminator Big Dye; 100% of reads chemistry: Dye-terminator Big Dye; 960731

Consensus quality: 144663 bases at least Q40 consensus quality: 154318 bases at least Q30 consensus quality: 153318 bases at least Q20 consensus quality: 153318 bases at least Q20 Insert size: 173000; agarose-fp quality coverage: 5.4 in Q20 bases; agarose-fp quality coverage: 5.9 in Q20 bases; sum-of-contigs
48575 480/...
48575 62315: conc...
48675 62315: gap of 100 op 62316 62415: gap of 15042 bp in length
62416 77457: contrig of 19377 bp in length
77458 77557: gap of 100 bp
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17558 96894: config of 27246 bp in length
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3817 7050: gap of 100 bp 6
6950: contig of 3134 bp in length
6951 7050: gap of 100 bp
7051 9136: contig of 2086 bp in length
9137 17859: contig of 8623 bp in length
17860 17959: gap of 100 bp
17960 26939: contig of 8980 bp in length
17960 27039: gap of 100 bp
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27040 36269: contig of 9230 bp in length
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Contact: sequence_submissions@genome.wi.mit.edu
Contact: project Information
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                                                                                                          Db 124639 AAAGAGGGCGCCGACGGCATCGCCAACGAGGACGCCGCCCAGGGCATCGCCAACGAG 124580
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/clone_lib="RPCI-11 Human Male BAC"
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Direct Submission
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Direct Submission
Submitted (07-DEC-1999) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
Submitted (01-FEB-2000) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman OK 73019, USA 9 (bases 1 to 98557) Wang,O., Fang,F., Fu,Y., Pan,H., Edelmann,L. and Roe,B.A. Direct Submission Submitted (03-FEB-2000) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang,Q., Fang,F., Fu,Y., Pan,H., Edelmann,L. and Roe,B.A. Direct Submission
Submitted (08-DEC-1999) Department of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
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Wang, O., Fang, F., Fu, Y., Pan, H., Edelmann, L. and Roe, B.A.
Direct Submission
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Submitted (26-JAN-2000) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (17-DEC-1999) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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Homo sapiens Chromosome 22q12 PAC Clone pac699j1 In CES-DGCR Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                     415;
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Because these overlapping clones came from different libraries there are numerous instances of insertions, deletions, and single nucleotide polymorphisms in the overlapping regions below.

AC008132[pac69565] 136107 145570 (0) overlaps AC008103[pac699j1) 132871 175358 (0) overlaps AC008103[pac699j1) 1 44355 (54202) AC007925[b48] 71505 165050 (0) overlaps AC008103[pac699j1) 1 443544 (4413) AC008103[pac699j1) 56194 (4413) AC008103[pac699j1) 56194 (6403) AC008103[pac699j1] 1 94144 (4413) AC008103[pac699j1] 56194 (6403) AC008103[pa
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Submitted (10-FEB-2000) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wang,Q., Fang,F., Fu,Y., Pan,H., Edelmann,L. and Roe,B.A.
Direct Submission
Submitted (08-FEB-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (12-MAR-2000) Department Of Chemistry And Biochemistry. The University Of Oklahoma, 620 Parrington Oval, Room 208, Normar
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Direct Submission
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/db_xref="taxon:9606"
/db_crome="22q12"
/chromosome="22q12"
/clone="pac699j1"
25600 a 24617 c 24180 g 24160 t
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1. .98557
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                                                                                                                                                                                                                                                                                                                    5 (bases 1 to 106650)

Zhan, M. and Roe, B.A.

Direct Submission

Submitted (31-MAY-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman

OK 73019, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 (Loses 1) and Roe, B.A.

Zhan, M. and Roe, B.A.

Direct Submission

Direct Submission

Submitted (25-SEP-1999) Department Of Chemistry And Biochemistry,

Submitted (26-SEP-1999) Department Of Chemistry And Biochemistry,

Submitted (26-SEP-1999) Department Of Chemistry And Biochemistry,
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Homo sapiens chromosome 22q11 clone b563b9, complete sequence.
AC007708
AC007708.13 GI:5923689
                                                                                                                                       on Sep 25, 1999 this sequence version replaced gi:591922.

Because these overlapping clones came from different libraries there are numerous instances of insertions, deletions, and single nucleotide polymorphisms in the overlapping regions below. nucleotide polymorphisms in the overlapping regions below. Ac008018(b379nl1) 146090 180888 (0) overlaps Ac007708(b563b9) 13437 (71723) Ac007708(b563b9) 1843 106650 (0) overlaps
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Direct Submission
Submitted (02-JUN-1999) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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1 (bases 1 to 106650)
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/organism="Homo sapiens"
/db_xref="taxon:9606"
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                                                                                                   Hua,A., Emanuel,B. and Roe,B.A.

Direct Submission
Submitted (13-AUG-1999) Department Of Chemistry And Biochemistry,
Submitted (13-AUG-1999) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                          ACUUY288 140876 bp DNA linear PRI 31-MAY
Homo sapiens chromosome 22q11 clone p413m7, complete sequence
AC009288
                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 140876)
Hua, A., Emanuel, B. and Roe, B.A.
              Hua, A., Emanuel, B. and Roe, B.A.
Direct Submission
Submitted (19-NOV-1999) Department Of Chemistry And Biochemistry,
                                                                                                                                                                                                                                                                                                      Homo sapiens
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/clone="b563b9"
30841 a 24372 c 23166 g 28271 t
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University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
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Pred. No. 1.
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                                                                                                                                     175358 bp DNA linear PRI 27-1
Homo sapiens chromosome 22q11 clone b291, complete sequence.
AC007981
AC007981.46 GI:7958972
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Hua, A., Emanuel, B. and Roe, B.A.
Direct Submission
Submitted (13-MAY-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hua,A., Emanuel,B. and Roe,B.A.

Birect Submission
Submitted (31-mAY-2000) Department of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
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5 (bases 1 to 140876)
                                          Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                          human.
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/db_xref="taxon:9606"
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Location/Qualifiers
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                                                                                                                                        source
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Because these overlapping clones came from different libraries there are numerous instances of insertions, deletions, and single nucleotide polymorphisms in the overlapping regions below.

ACO08132(pac99506) 4747 145670 (0) overlaps AC007981(b291) 1 142425 (32936) AC007981(b291) 59901 175358 (0) overlaps AC007325(b48) 1 115948 (49102) AC007981(b291) 132871 175358 (0) overlaps
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FU,Y., Pan,H., Shalkh,T., Kurahashi,H., Emanuel,B. and Roe,B.A. Direct Submission
Submitted (27-MAY-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
or 72010 mea.
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Direct Submission
Submitted (18-MAY-2000) Department Of Chemistry And Biochemistry,
Submitted (18-MAY-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
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Direct Submission
Submitted (12-JAN-2000) Department Of Chemistry And Biochemistry,
Submitted (12-JAN-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
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Fu, Y., Pan, H., Shaikh, T., Kuraman, ...,

Direct Submission

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Department of Chemistry And Biochemistry,

Submitted (07-3UL-1999) Department of Chemistry,

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On May 20, 20
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Submitted (12-MAR-2000) Department Of Chemistry And Biochemistry, The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fu.Y., Pan,H., Shaikh,T., Kurahashi,H., Emanuel,B. and Roe,B.A. Direct Submission
Submitted (15-JAN-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fu, Y., Pan, H., Shaikh, T., Kurahasni, H., Emanuel, D., C., Direct Submission
Submitted (08-JAN-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 (bases 1 to 175358)
9 (bases 1 to 175358)
Fu,Y., Pan,H., Shalkh,T., Kurahashi,H., Emanuel,B. and Roe,B.A.
Direct Submission
Submitted (20-MAY-2000) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

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1 (v. Pan, H., Shaikh, T., Kurahashi, H., Emanuel, B. and Roe, B.A.

Homo sapiens Chromosome 22q11 BAC Clone b291 In CES-DGCR Region
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                              /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="22q11"
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                                                                               3 (bases 1 to 180884)
Zhan, M. and Roe, B.A.
Direct Submission
Submitted (01-NOV-1999) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman,
OK 72010 TES
                                                                                                                                                                                                                                                                                    2 (bases 1 to 180884)
Zhan,M. and Roe,B.A.
Direct Submission
Submitted (10-UUL-1999) Deports
The University Of Oklahoma,
                      OK 73019, USA
4 (bases 1 to 180884)
Zhan, M. and Roe, B.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       unpublished
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Pred. No. 2.4e-23;
                                                                                                                                                                                                                                                                                                                          Department Of Chemistry And Biochemistry,
                                                                                                                                                                                                                                                                                            620 Parrington Oval,
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Qy 422 Db 103513	Qy 362 Db 103453	Qy 302 (	Qy 242 ( Db 103333 (	Qy 182 ( рь 103273 (	Qy 122 ( Db 103213 (	Qy 65 ( pb 103153 (	Qy 5 (	Query Mat Best Loca Matches	REFERENCE AUTHORS TITLE JOURNAL REFERENCE AUTHORS TITLE JOURNAL COMMENT Source FEATURES FOURIES FOURIN FOURIES FOURIES FOURIES FOURIES FOURIES FOURIES FOURIES FOURIES	TITLE JOURNAL
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Search completed: October 10, 2002, 18:51:52 Job time: 1325.87 secs

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US-08-209-747-1
US-08-458-298-1
US-08-99-8-416-915
US-08-99-8-416-915
US-09-165-264-8
US-09-165-264-13
US-09-165-264-14
                US-08-469-802B-3
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Sequence 1, Appli
Sequence 7, Appli
Sequence 8, Appli
Sequence 11, Appli
Sequence 13, Appli
Sequence 13, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 14, Appli
Sequence 17, Appli
Sequence 20, Appli
Sequence 3, Appli
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Sequence 17, Appl
Sequence 19, Appl
Sequence 19, Appl
Sequence 1, Appl
Sequence 1, Appl
Sequence 1, Appl
Sequence 1, Appli
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16.8	16.9	16.9	17.0		17.0	17.0	17.0	17.0	17.1	18.0	18.0	18.2	18.2	18.2	18.2	18.2	18.2
15202	152331	18596	6449	6449	6449	6192	6192	6192	2190	9551	9551	6530	6530	6530	2165	2165	234
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US-08-922-635-21	US-09-128-155-16	US~09-318-448-11	US-09-134-916A-4	US-09-083-116-4	US-08-479-537A-4	US-09-134-916A-1	US-09-083-116-1	US-08-479-537A-1	US-09-625-188-19	US-08-800-644-93	US-08-056-200-93	PCT-US93-03993-1	US-08-458-240-1	US-08-146-930-1	US-09-189-344-2	US-08-669-721-2	US-08-267-803B-3
Seguence 21,	Sequence 16, App	Sequence 11, App	Sequence 4, Appl:	Sequence 4, A	Sequence 4, Ap	Seguence 1, Appl	Sequence 1, Ap	Sequence 1, Appl.	Sequence 19, Appl		-	Sequence 1, Appl:	Sequence 1, Appl	Sequence 1, Appl	Seguence 2, Ap	Sequence 2, Appl	Sequence 3, Appli

## ALIGNMENTS

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RESULT 1

5273901-6/c

5273901-6/c

5273901-6/c

Patent No. 5273901

Patent No. 5273901

Patent No. 5273901

APPLICANT: JACOBSON, JAMES W.; STRAUSBERG, ROBERT L.; WILSON, SUSAN D.; POPE, SHARON H.; STRAUSBERG, SUSAN L.; RUFF, MICHAEL D.; AUGUSTINE, PATRICLA C.; DANFORTH, HARRY D.

TITLE OF INVENTION: GENETICALLY ENGINEERED COCCIDIOSIS

SPOROZOTTE 21.5 KB AWTIGEN, AC-6B

NUMBER OF SEQUENCES: 11

CURRENT APPLICATION DATA:
APPLICATION NAMER: US/07/581,693

FILING DATE: 12-5EP-1990

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 215,162

FILING DATE: 05-JUL-1988

APPLICATION NUMBER: 746,520

FILING DATE: 19-JUN-1985

APPLICATION NUMBER: 627,811

FILING DATE: 05-JUL-1984

FILING DATE: 05-JUL-1984

FILING DATE: 05-JUL-1984
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Best Local
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                                                                                                                                                                                                                186
                                                                                                                                                                                                                                                                                                                                                     126 GCTGAGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTGAG 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          134 GCAGGTGCTGCTGCTGCTGCAGGTGCTG 101
                                                  306 GCTGGGGCTGANGCTGGGGCTGGGGCTGNNGCTG 339
                                                                                                           194 GCAGCTGGTGTTGCTGTAGCTGCTGCTGTTGCAGCTGCTGTTGCTGCTGCTGCTGCT 135
                                                                                                                                                                                                                                                                                                                         374 GTTTTCGCTTCTGCTTCTGCTGCTGCTGCTGCTGCTCCTTCGGTTTCTGTTCGTGCT 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66 GCTGGGGCTGAGGCTGGGGCTGGGGCTGGGGCTGGGACTGAGGCTGGGGCTGGG 125
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                                                                                                                                                           GCTGAGGTTGGGGGCTGGGGCTGACGCTGGGGCTGAGGCTNGGNCTGAGGCTGGA 305
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56.3%;
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; LOCATION: 1.1656
; OTHER INFORMATION: /note= "domain = ecdysone receptor
; OTHER INFORMATION: ligand binding domain."
US-08-659-188-17
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US-08-659-188-17/c
. sequence 17, Application US/08659188
US-08-655-227-17/c
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (619) 535-89.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION UNMER: 31,815
REFERENCE/DOCKET NUMBER: P-C
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                             1161 GGGCTGGGGCTGAGGCTGATGCTGGGCC 1128
                                                                                                                                                        1221 AGGTTGTAGCTGCGGCTGTGTCTGGTGCTGGGAATCGTTCTGGGTCAGGGAGGAGGGTTG 1162
                                                                                                                                                                                                                                      1281 CGTCTGAAGCTGTGGTTGGAGCTGGGGTTGCAGTTGACCTTGCAGCTGAGGTGGTAGCTG 1222
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CURRENT APPLICATION DATA:
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STATE: Call
COUNTRY: USI
COUNTRY: 92122
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ADDRESSEE: Campbell and Flores
STREET: 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Yanofsky, Martin F.
TITLE OF INVENTION: Seed Plants Exhibiting Inducible Early
TITLE OF INVENTION: Reproductive Development and Methods of Making Same
NUMBER OF SEQUENCES: 26
                                                                                                    190 GGGCTGGGACTGAGGCTGGGGCTANGGCTGGGGC 223
                                                                                                                                                                                           130 AGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGGCTGAGGTTG 189
                                                                                                                                                                                                                                                                             70 GGGCTGAGGCTGGGGCTGGGGCTGGGGCTGGGGACTGAGGCTGGGGCTGGGGCTG 129
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CITY: San Diego
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION:
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TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                   145;
                                                                                                                                                                                                                                                                                                                                                                                                               20.8%;
Similarity 67.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1: 1656 base pairs
nucleic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 3;
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US-08-655-241-17/c
Sequence 17, Application US/08655241
Patent No. 602543
GENERAL INFORMATION:
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; LOCATION: 1.1656
; OTHER INFORMATION: /note= "domain = ecdysone receptor
; OTHER INFORMATION: ligand binding domain."
US-08-655-227-17
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Patent No. 6025483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (619) 535-900
TELEFAX: (619) 535-8949
INFORMATION FOR EQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31.815
REFERENCE/DOCKET NUMBER: P-I
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 43.0
CITY: San Diego
CTATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Campbell and Flores
STREET: 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Yanofsky, Martin F.
TITLE OF INVENTION: Malze and Cauliflower APETALAl Gene
TITLE OF INVENTION: Products and Nucleic Acid Molecules Encoding
NUMBER OF SEQUENCES: 26
APPLICANT:
                                                                                                                                                            1161 GGGCTGGGGCTGAGGCTGATGCTGGGCC 1128
                                                                                                                                                                                                                                        1221 AGGTTGTAGCTGCGGCTGTGTCTGGTGCTGGGAATCGTTCTGGGTCAGGGAGGAGGGTTG 1162
                                                                                                                                                                                                                                                                                                                         1281 CGTCTGAAGCTGTGGAGCTGGGGGTTGCAGTTGACCTTGCAGCTGAGGTGGTAGCTG 1222
                                                                                                                                                                                                                                                                                                                                                                                                       1341 GGGCACGGGAGCGGAGACGGGAAGGAGCTGTGGCTGGTTGGATCTGTGGCTGGAGTTG 1282
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                                                                                                                                                                                   190 GGGCTGGGACTGAGGCTGGGGGC 223
                                                                                                                                                                                                                                                                           130 AGGCTGGGGCTGGGACTGAGGCTGGGGACTGAGGCTGGGGCTGAGGTTG 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Ralaman
                                                                                                                                                                                                                                                                                                                                                                                                                              10 GGGCTGGGGCTGAGGCTGGAGCTGGGACTGAGGCTGGGGGCTGGGGCTTG 69
                                                                                                                                                                                                                                                                                                                                                                70 GGGCTGAGGCTGGGGCTGGGGGCTGGGGGCTGGGGCTGGGGCTGGGGCTG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/0 FILING DATE: 05-JUN-1996 CLASSIFICATION: 800
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
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Yanofsky, Martin F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Release #1.0, Version #1.25
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                Sequence 17, Application US/09398326
Patent No. 6355863
GENERAL INFORMATION:
APPLICANT: Yanofsky, Martin F.
TITLE OF INVENTION: Seed Plants
TITLE OF INVENTION: Reproductive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: P-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
TELEFAX: (619) 535-8949
INFORMATION FOR SEQ ID NO: 17:
                                                                                                                                                                                                                             1161 GGGCTGGGGCTGAGGCTGATGCTGGGCC 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1341 GGGCACGGGAGCGGGAAGGAGGAGGCTGTGGCTTGAATCTGTGGCTGGAGTTG 1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: CLASS 801
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Weigel, Detlef
TITLE OF INVENTION: Development and Methods of Making Same
                                                                                                                                                                                                                                                                                                         1221 AGGTTGTAGCTGCGGCTGTGTCTGGTGCTGGGAATCGTTCTGGGTCAGGGAGGAGGAGGTTG 1162
                                                                                                                                                                                                                                                                                                                                                                                        1281 CGTCTGAAGCTGTGGAGCTGGGGGTTGCAGTTGACCTTGCAGCTGAGGTGGTAGCTG 1222
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                190 GGGCTGGGGACTGAGGCTGGGGCCTANGGCTGGGGC 223
                                                                                                                                                                                                                                                                                                                                130 AGGCTGGGGCTGGGGCTGGGGCTGGGGACTGAGGCTGGGGGCTGAGGTTG 189
                                                                                                                                                                                                                                                                                                                                                                                                                               70 GGGCTGAGGCTGGGGCTGGGGCTGGGGCTGGGACTGAGGCTGGGGCCTGGGGCCTG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GGGCTGGGGCTGAGGCTGGAGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTG 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature
LOCATION: 1.1656
OTHER INFORMATION: /note- "domain = ecdysone receptor
OTHER INFORMATION: ligand binding domain."
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4370 La Jolla Village Drive, Suite 700
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N: CLASS 800
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Seed Plants Exhibiting Inducible Early
Reproductive Development and Methods of Making Same
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RESULT 6
US-09-144-759-17/c
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GENERAL INFORMATION:
APPLICANT: Hoock, Thomas
APPLICANT: Germann, Ursula
APPLICANT: Kwong, Ann
APPLICANT: Kwong, Ann
TITLE OF INVENTION: FUSION PROTEINS, DNA MOLECULES, VECTORS, AND HOST CELLS
TITLE OF INVENTION: USEFUL FOR MEASURING PROTEASE ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 17
SEQUENCE CHARACTERISTICS:
LENGTH: 1656 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                         Sequence 17, Application US/09144759 Patent No. 6117639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 20.8%;
Best Local Similarity 67.8%;
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NAME/KEY:
LOCATION:
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NAME/KEY: misc_feature
LOCATION: 1..1656
OTHER INFORMATION: /note= "domain = ecdysone receptor
OTHER INFORMATION: ligand binding domain."
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                                                                                                                                                                                                                                                1161 GGGCTGGGGCTGAGGCTGATGCTGGGCC 1128
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ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                              1221 AGGTTGTAGCTGCGGCTGTGTCTGGTGCTGGGAATCGTTCTGGGTCAGGGAGGAGGGTTG 1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1341 GGGCACGGGAGCGGGAACGGGAAGGTTGTGGCTTGGTTGATCTGTGGCTTGGAGTTG 1282
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                                                                                                                                                                                                                                                                                  190 GGGCTGGGACTGAGGCTGGGGCTANGGCTGGGGC 223
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Pc1cc
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CITY: San Diego
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 08 FILING DATE: 05-JUN-1996
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Pred. No. 8.2e-14;
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US-09-144-759-19/c
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US-09-144-759-17
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Patent No. 6117639
GENERAL INFORMATION:
APPLICANT: Hoock, Thomas
APPLICANT: Germann, Ursula
APPLICANT: Kwong, Ann
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CURRENT ETLING DATE: 1998-08-31
NUMBER OF SEQ ID NOS: 24
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 17
LENGTH: 2241
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ
                                                                                                                                                                                                                        Matches 145;
                                                                                                                                                                                                                                                         Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: FUSION PROTEINS, DNA MOLECULES, VECTORS, AND HOST CELLS TITLE OF INVENTION: USEFUL FOR MEASURING PROTEASE ACTIVITY EILE REFERENCE: VPL/98-08 CURRENT APPLICATION NUMBER: US/09/144,759 CURRENT FILING DATE: 198-08-31 NUMBER OF SEQ ID NOS: 24 SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
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                                                                                                                                        1983 GGGCACGGGAGCGGGAACGGGAAGGTTGTGGCTGTGGTTGAATCTGTGGCTGGAGTTG 1924
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                        130 AGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTGGGGCTGAGGTTG 189
                                                                                                                                                                                                                                                                                                                                                                                                                   ID NO 19
ENGTH: 2295
                                                                                   70 GGGCTGAGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTG 129
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  Similarity
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Pred. No. 8.6
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8.7e-14;
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69; Indels
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US-08-209-747-1
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/08209747 Patent No. 5733771
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CURRENT APPLICATION NUMBER: US/09/144,759
CURRENT FILING DATE: 1998-08-31
NUMBER OF SEQ ID NOS: 24
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APPLICANT: Germann, Ursula
APPLICANT: Kwong, Ann
                                                                                                                                                                                                                                                                                                                                               GENERAL
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TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Description of Articorner information: artificial sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1989 GGCACGGGAGCGGAACGGGAAGGAGCTGTGGTTGGATCTGTGGCTGGAGTTG 1930
                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                            NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                     NERAL INFORMATION:
APPLICANT: Lewis, Randolph V.
APPLICANT: Colgin, Mark
TITLE OF INVENTION: cDNAs Encoding
TITLE OF INVENTION: Silk Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1863 AGGTTGTAGCTGCGGCTGTGTCTGGGTGCTGGGAATCGTTCTGGGTCAGGGAGGAGGGTTG 1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1869 AGGTTGTAGCTGCGGCTGTGTCTGGTGCTGGGAATCGTTCTGGGTCAGGGAGGAGGGTTG 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1929 CGTCTGAAGCTGTGGTTGGAGCTGGGGTTGCAGTTGACCTTGCAGCTGAGGTGGTAGCTG 1870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190 GGGCTGGGACTGAGGCTGGGGCTANGGCTGGGGC 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      70 GGCTGAGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 GGGCTGGGGCTGAGGCTGGAGCTGGAGCTGAGGCTGGGGCTGGGGCTGGGGCTG 69
                                                                                        COUNTRY: USA
ZIP: 22040-3487
                                                                                                                                                 ADDRESSEE: Birch, Stewart, Kolasch & Birch STREET: P.O. Box 747 CITY: Falls Church
OPERATING SYSTEM:
                                                                                                                                STATE:
                       COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match 20.8%;
Local Similarity 67.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  145;
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                                                                                                                           Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
  IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description of Artificial Sequence:man-made
                                                                                                                                                                                                                                                                             cDNAs Encoding Minor Ampullate Spider
                                                                                                                                                                                                                                       56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 104.2; DB 3
Pred. No. 8.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 3;
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                                                                                                                          Sequence 1, Application US/08458298 Patent No. 5756677
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                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS: LENGTH: 2793 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
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ATTORNEY/AGENT INFORMATION:
                  APPLICANT: Lewis, Randolph V. APPLICANT: Colgin, Mark TITLE OF INVENTION: CONAS EncuTITLE OF INVENTION: Silk Prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGINAL SOURCE:
NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                               360 CTGAAGCTGAGGCTGGGGCNTAACGCTGAGCTNGNNGCT 398
                                                                                                                                                                                                                                                                                                                                          844 CTGCTGCTGGAGCAGGATCTGGAGGCGCTGGCGGTTACGGTAGAGGTGCTGGTGCTGGAG 903
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LOCATION: 183..2675
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: double
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.25
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Murphy Jr., Gerald M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   703-205-8050
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                       Silk Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20.5%;
                                        cDNAs Encoding Minor Ampullate Spider
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 703-205-8050
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 2793 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-205-8000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 14-MAR-1994
ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER: US 0
FILING DATE: 14-MAR-1994
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: CI
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         547 CAGCTGCTGGAGCAGGAGCCGGAGGCGCTGGTTGCTTACGGTAGAGGTGCTGGTGCTGGAG 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Birch, St
STREET: P.O. Box 747
CITY: Falls Church
                                               844 CTGCTGCTGGAGCAGGATCTGGAGGCGCTGGCGGTTACGGTAGAGGTGCTGGTGCTGGAG
                                                                                                                               784 CTGGAGGCTACGGTGGTCAAGGTGGGTACGGTGCCGGAGCAGGAGCTGGTGCGGCTGCTG 843
                                                                                                                                                                                                                    724 GTGCTGGCGGTTACGGTAGAGGTGCTGGTGCTGGAGCAGGAGCCGCTGCGGGTGCTGGAG
                                                                                                                                                                                                                                                              181 CTGAGGTTGGGGCTGGGGACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTAGGG
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    360 CTGAAGCTGAGGCTGGGGCNTAACGCTGAGCTNGNNGCT 398
                                                                                    301 CTGGAGCTGGGGCTGANGCTGG-GGCTGGGGGCTGNNGCTGANCTGGGGCTGAGGCTCCNG
                                                                                                                                                                       241 CTNAGGCTGAGGTTGGGGCTGGGGCTGGNGCTGACGCTGGGGCTGAGGCTNGGNCTGAGG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: /product= "N. clavipes OTHER INFORMATION: ampullate silk protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Murphy Jr., Gerald M
REGISTRATION NUMBER: 28,97
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: CDS
LOCATION: 183..2675
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                            61 CTGGGGCTGGGGCTGAGGCTGGGGCTGGGGCTGGGGCTGGGGACTGAGGCTGGGG 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
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                                                                                Sequence 915, Application US/08998416 Patent No. 6239264
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 67. Matches 144; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                        2338 CGTCTGAAGCTGTGGTTGGAGCTGGGGTTGCAGTTGACCTTGCAGTTGAGGTGGTAGCTG 2279
                                                                                                                                                                                                                                                                                                                                                                                                                                                        2398 GGGCACGGGAGCGGAGACGGGAAGGAGCTGTGGCTGTGGTTGAATCTGTGGCTGGAGTTG 2339
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1489
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92
FILING DATE: 19920803
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
                                                                                                                                                                                                        2218 GGGCTGGGGCTGAGGCTGATGCTGGGCC 2185
                                                                                                                                                                                                                                                                                       2278 AGGTTGTAGCTGCGGCTGTGTGTGCTGGGAATCGTTCTGGGTCAGGGAGGAGGATG 2219
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MEDIUM TYPE: 5.25 inch, 360 Kb 1
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS_MS-DOS
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                                                                                                                                                                                                                                  190 GGGCTGGGACTGAGGCTGGGGGCTANGGCTGGGGC 223
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                                                                                                                                                                                                                                                                                                                                                                                                               70 GGGCTGAGGCTGGGGCTGGGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTG 129
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Fitts, Renee A. REGISTRATION NUMBER: 35,136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
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Philippsen, Peter
Pohlmann, Rainer
Steiner, Sabine
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
APPLICANT:
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ORIGINAL SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 688 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: 919-541-8587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: CH 00 FILING DATE: 31 DEC-1996 ATTORNEY/AGENT INFORMATION: NAME: Meigs, J. Timothy REGISTRATION NUMBER: 38,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 24-DEC-
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
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APPLICANT: Knechtle, Philipp
APPLICANT: Rebischung, COrinne
TITLE OF INVENTION: GENOWIC DNA SEQUENCES OF ASHBYA GOSSYPII
TITLE OF INVENTION: AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
361 TGAAGCTGAGGCTGGGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATG 408
                                       301 CTGGAGCTGGGGCTGANGCTGGGGCTGGGGCTGNNGCTGANCTGGGGGCTGAGGCTCCNGC 360
                                                                                                                     369 CAGTTGTGGCTGATGAGGCTGTAAACCAAGCTGTTGTTGTTGTTGTAGTTGCGGTTGAGG
                                                                                                                                                            241 CTNAGGCTGAGGTTGGGGCTGGGGCTGAGGCTGAGGCTAGGCTAGGCTAGGCTAGGCTAGG
                                                                                                                                                                                                      429 CIGCIGCGICIGCIGCGCTCTGCTGCGCTTGTGGTTGTTGCGCCTGCGCCTGCGC 370
                                                                                                                                                                                                                                                181 CTGAGGTTGGGGCTGGGACTGAGGCTGGGGCTANGGCTGGGGCTGGGGCTAGGG 240
                                                                                                                                                                                                                                                                                       121 CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTGGGG 180
                                                                                                                                                                                                                                                                                                                                                                     549 CTGGACTTGCTGGAACCGGTTGTGGTTGCTGTGATTGTGGTTTCAATTGTGGTTGTGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: No. 6239264artis Corporation
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: No. 6239264th Carolina
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Pred. No. 2.2e-13;
0; Mismatches 197;
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; Sequence 7, Application US/09165264
; Patent No. 6197510
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US-09-165-264-7
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US-09-165-264-8
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                                                           SOFTWARE: PATE SEQ ID NO 8
LENGTH: 319
TYPE: DNA
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CURRENT FILING DATE: 198-10-01
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 7
LENGTH: 320
TYPE: DNA
                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                       Sequence 8, Application US/09165264
Patent No. 6197510
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Best Local Similarity
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OTHER INFORMATION: Description of Artificial Sequence:Primer sequence - 09-165-264-8
                                                                                                                        CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
                                                                                                                                                                        APPLICANT: Vinayagamoorthy, Thuraiayah TITLE OF INVENTION: Multi-Loci Genomic Analysis FILE REFERENCE: 44747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                             ORGANISM: Artificial Sequence FEATURE:
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                                                                                                             PatentIn Ver. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11, Application US/09165264 Patent No. 6197510
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Best Local Similarity
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Best Local Similarity
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                                                                                                                                                                                                                                                             Matches 175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Vinayagamoorthy, Thuraiayah
TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747
                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 320
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Roest-Crollius, H., Jaillon, O., Dasilva, C., Bouneau, L., Fisher, C., Bernot, A., Fizames, C., Wincker, P., Brottier, P., Quetier, F., Saurin, W. and Weissenbach, J.
Human gene number estimate provided by genome wide analysis using Tetracdon nigroviridis DNA sequence
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                                              Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.
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Tetraodon nigroviridis.
Tetraodon nigroviridis
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AL235423 Tetraodon
AL288200 Tetraodon
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                                Genoscope
                                                                                                                                Roest-Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C., Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetier,F., Saurin,W. and Weissenbach,J.
Human gene number estimate provided by genome wide analysis using Tetraodon nigroviridis DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tetraodontidae; Tet:
1 (bases 1 to 723)
Roest-Crollius, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CNS01UT4 723 bp DNA linear GSS 12-Mz Tetraodon nigroviridis genome survey sequence PUC-Ori end of 197G24 of library G from Tetraodon nigroviridis, genomic surv
Direct Submission
                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                  Charaterization and repeat analysis of the compact genome of the freshwater pufferfish Tetraodon nigroviridis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bouneau,L., Billault,A., Quetier,F., Saurin,W., Bernot,A.
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/clone="062P02"
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/note="Genoscope sequence ID : C0BG062DH01SP1~end
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Pred. No. 2.5e-29
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Roest-Crollius, H., Jaillon, O., Dasilva, C.,
                                      Unpublished
                                                                             Charaterization and repeat analysis of the compact genome of the
                                                                                                                                        Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames, C., Fisher, C.,
                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
                                                                                                                                                                                                                                                                Tetraodon nigroviridis
                                                                                                                                                                                                                                                                                  GSS; genome survey sequence. Tetraodon nigroviridis.
                                                                                                                                                                                                                                                                                                     AL191876.1 GI:7829980
GSS; genome survey sequ
                                                                                                                                                                                                                                                                                                                                                                  sequence.
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Tetraodon nigroviridis genome survey sequence T7 end of clone
256B21 of library G from Tetraodon nigroviridis, genomic survey
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                                                             freshwater pufferfish
                                                                                                      Weissenbach,J
                                                                                                                 Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A.
                                                                                                                                                                                 Tetraodontidae;
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                      (bases 1 to 613)
                                                                                                                                                            (bases 1 to 613)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="G"
/note="Genoscope sequence ID : COAG197BD12SP1-end
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/db_xref="taxon:99883"
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                                                                                                                                                                                 Tetraodon
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                                                           Tetraodon nigroviridis
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Pred. No.
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Bouneau, L., Fisher, C.,
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                                                                                                                                                                          AL265983.1 GI:7987741
GSS; genome survey sequence.
GSS; genome survey sequence.
Tetraodon nigroviridis.
Tetraodon nigroviridis
Tetraodon 
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Tetraodon nigroviridis genome survey sequence T7 end of clone
063J24 of library G from Tetraodon nigroviridis, genomic survey
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Tetraodontidae; Tetraodon.
1 (bases 1 to 1061)
Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames, C., Fisher, C.
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/Ob_xrefr="taxon:9983"
/Clone="256821"
/Clone=1b="G"
/Clone_lib="G"
/notre="Genoscope sequence ID : COAG256CA11LP1-end : T7"
/notre="Genoscope sequence ID t 12 others
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Pred. No. 8.8e-29;
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/db_xref="taxon:99883"
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121 CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGG 180
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                                                                                                                                                                                                                                                                                                                                                                               290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Roest-Crollius, H., Jaillon, O., Dasilva, C., Bouneau, L., Fish Bernot, A., Fizames, C., Wincker, P., Brottler, P., Quetier, F., Saurin, W. and Weissenbach, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genoscope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human gene number estimate provided by genome wide analysis using Tetraodon nigroviridis DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
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Weissenbach, J
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Mcanthopterygii; Percomorpha; Tetraodontiformes;
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                                                                             Local Similarity
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/db_xref="taxon:99883"
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
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Human gene number estimate provided by genome wide analysis using
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GSS; genome survey sequence.
Tetraodon nigroviridis.
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/clone_lib="G"
/note="Genoscope sequence ID : COAG220AH03LP1~end
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                                                                                            /organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGTTGGGGCTGGGGCTGAGGCTGGGGCTGAGGCTGGGGCTAGGGCT 242
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
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AL194483.1
                                                                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 899)
Roest-Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C., Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetler,F., Saurin,W. and Weissenbach,J.
Human gene number estimate provided by genome wide analysis using retraction nigroviridis DNA sequence
                                                                                                                                                                    Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tetraodon nigroviridis genome survey sequence PUC-Ori end of cl
131J11 of library G from Tetraodon nigroviridis, genomic survey
                                                                                                                                              genome. For more information, please (
http://www.genoscope.cns.fr/Tetraodon
                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Charaterization and repeat analysis of the compact genome of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames, C., Fisher, C., Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSS; genome survey sequence. Tetraodon nigroviridis.
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   /organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
/clone="131J11"
                                                                                                                 Location/Qualifiers
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77.78;
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Pred. No. 6.3e-25
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGG 180
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Direct Submission Submitted (12-Apr-2000) to the EMBL/GenBank/DDBJ databases This sequence is a single read and was generated as part of a large
                                                                                                                                                                                                                              Roest-Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C., Bernot,A., Fizames,C., Wincker,P., Brottler,P., Quetler,F., Saurin,W. and Weissenbach,J.
                                                                                                                                                                                                                                                                                                                                                                         Charaterization and repeat analysis of the compact genome of the freshwater pufferfish Tetraodon nigroviridis
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                                                                                                                                                                    Human gene number estimate provided by genome wide analysis using Tetraodon nigroviridis DNA sequence
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                                                                                                                                          Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                          Weissenbach,J
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/note="Genoscope sequence ID : COAG131CE06SP1-end : PUC-Ori"
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Pred. No. 6.7e-25;
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                                                                                                                                                                                                                                                                                                                                                           Tetraodon nigroviridis
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetraodontidae; Tetraodon.
Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetier,F., Saurin,W. and Weissenbach,J.
Human gene number estimate provided by genome wide analysis using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CNS028QT 791 bp DNA linear GSS 12-MAY-2000
Tetraodon nigroviridis genome survey sequence T7 end of clone
245G14 of library G from Tetraodon nigroviridis, genomic survey
                                                                                             2 (bases 1 to 791)
Roest-Crollius, H., Jaillon, O., Dasilva, C.,
                                                                                                                                                                                                               Charaterization and repeat analysis of the compact genome of the
                                                                                                                                                                                                                                                Weissenbach,J
                                                                                                                                                                                                                                                                        Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames, C., Fizames, L., Billault, A., Quetier, F., Saurin, W., Bernot, A.
                                                                                                                                                                                                                                                                                                                             Tetraodontidae; Teti
1 (bases 1 to 791)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSS; genome survey sequence. Tetraodon nigroviridis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AL186302.1
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                                                                                                                                                                                 freshwater pufferfish Tetraodon nigroviridis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
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/db_xref="taxon:99883"
/db_xref="taxon:99883"
/clone="19103"
/clone_1ib="G"
/note="Genoscope sequence ID : COAG219AE02LP1-end :
/note="Genoscope sequence ID : 4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
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73.58;
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Pred. No. 1.4
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                                                                                          Bouneau, L., Fisher, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                           Neoteleostei;
                                                                                                                                                                                                                                                                                                         Fisher, C.,
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167F12 of
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Roest-Crollius, H., J
                                                                                                                                                                                                                                                                                                      Tetraodon nigroviridis.
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360 CTGAAGCTGAGGCTTGAGGCTAACGCTAGCTTGAGCTAATGCTTGACTAA 417
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
                                                                                                                                                                                                                                                                                                                                                    AL214842
AL214842.1 GI:7873661
GSS; genome survey sequence.
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Bouneau,L., Billault,A., Quetier,F., Saurin,W., Bernot,A. and Weissenbach,J. Charaterization and repeat analysis of the compact genome of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://www.genoscope.cns.fr/Tetraodon.
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/db_xref="taxon:99883"
/clone="245G14"
/clone="15="G"
/clone_ib="G"
/note="Genoscope sequence ID : COAG245BD07LP1~end : T7"
/note="Tenoscope sequence ID : COAG245BD07LP1~end : T7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nigroviridis genome survey sequence T7 library G from Tetraodon nigroviridis,
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                                                                                                    Jaillon, O.,
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                                                                                                    Dasilva,C.,
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                                                                                                    Fizames,C.,
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                                                                                                    Fisher, C.,
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            sequence.
AL296008
AL296008.1 GI:8034588
AL296008.1 GI:8034588
Tetracdon nigroviridis.
Tetracdon nigroviridis.
Tetracdon nigroviridis.
Eukaryota: Metazoa: Chordata: C
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Roest-Crollius, H., Jaillon, O., Dasilva, C., Bouneau, L., Fisher, C., Bernot, A., Fizames, C., Wincker, P., Brottier, P., Quetier, F., Saurin, W. and Weissenbach, J.
Human gene number estimate provided by genome wide analysis using Tetraodon nigroviridis DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases This sequence is a single read and was generated as part of a scale clone-end sequencing project of the Tetraodon nigrovirid genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.
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                                                                                                                                  CNS04LE7 1101 bp DNA linear GSS Tetraodon nigroviridis genome survey sequence PUC-Ori er 118102 of library G from Tetraodon nigroviridis, genomic
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Actinopterygii;
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/clone_lib="G"
/note="Genoscope sequence ID : COAG167DC06LP1~end
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/db_xref="taxon:99883"
/clone="167F12"
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Neopterygii;
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Pred. No. 2.1e-23;
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 Vertebrata; Euteleostomi;
Euteleostei; Neoteleostei
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                                                                                                                                                      GCTNAGGCTGAGGTTGGGGCTGGGGCTGGAGGCTGGGGCTGAGGCTNGGNCTGAG
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                                  GCTGAAGCTGAGGCTGGGGCNTAACGCT 386
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1 (bases 1 to 1101)
Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames
Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames
Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      submitted (12-APR-2000) to the EMBL/GenBank/DDBJ dat This sequence is a single read and was generated as scale clone-end sequencing project of the Tetraodon genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Roest-Crollius, H., Jaillon, O., Dasilva, C., Bouneau, L., Bernot, A., Fizames, C., Wincker, P., Brottier, P., Queties Saurin, W. and Weissenbach, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Charaterization and repeat analysis of the compact genome of the freshwater pufferfish Tetraodon nigroviridis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genoscope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human gene number estimate provided 
Tetraodon nigroviridis DNA sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
/clone="118102"
/clone="118102"
/clone="118-02"
/clone="6"
Clone="11b="G"
/note="Genoscope sequence ID : C0BG118BE01Sp1-end pUC-Ori"
355 c 282 g 245 t 21 others
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74.78;
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Pred. No. 3.6e-23;
3; Mismatches 92
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as part of a
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Search completed: October Job time: 702.733 secs

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ABA28556
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AAQ03665
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Sequence homologou
Human foetal liver
Probe #7022 for ge
Human brain expres
Human bone marrow
Probe #6667 for ge
Probe #8847 used t
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DNA encoding novel
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## ALIGNMENTS

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RESULT 1
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AC AAD1
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24-SEP-2001 (first entry)

AAD11124 standard; DNA; 1232 BP.

Human small cell lung cancer associated gene, Novel-2.

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DR XX	PI	PA	PA	PA	XX	PR	××	PF	××	PD	XX	PN	××	so	XX	KW	KW	KW
WPI; 2001-457597/49.	Stockert E, Scanlan MJ, Jager D, Old LJ, Gure AO, Chen Y;	(CORR ) CORNELL RES FOUND INC.	(SLOK ) SLOAN KETTERING INST CANCER RES.	(LUDW~) LUDWIG INST CANCER RES.		21-JAN-2000; 2000US-0489101.		19~JAN-2001; 2001WO-US02015.		26-JUL-2001.		WO200153349-A2.		Homo sapiens.		leimyosarcoma; synovial sarcoma; cytostatic; ds.	melanoma; cancer; colon; breast; head; neck; transitional cancer;	Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA;

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RESULT 2
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                  Sequence homologous to Drosophila Per gene
                                                   07-AUG-1989
                                                                                  AAQ03665;
                                                                                                               AAQ03665 standard; DNA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by an isolated nucleic acid comprising an NA Group 3 or 4 molecule -
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Best Local :
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                                                              ABA60274 standard;
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(first entry)
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This sequence is used as a probe and is contained in plasmid pSp64.2 5EI. It is homologous to the sequence of a 2.5 kb fragment of the per gene of Drosophila. The motlifs ACNGGN and/or TCAGGC (N=T, U, G, A, or C) or their complementary sequences are repeated in the probe. It is used in a hybridisation assay to determine the sex of ruminant embryos. Either (i) Southern- or (ii) Dot-blot techniques can be utilised and Y-chromosome shows up as intense signal either obscuring most of the hybridisation track in (i) or surrounding the dots in (ii). Significant results can be obtd. using samples of less than 50 ng weight.
                                                                                                                                                                                                1701 CTGTGCCTGTGCCTGTGCCTGTGCCTGTGCCTGTGACTTTGGCT 1652
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 17; fig 1; 37pp; French.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTGGGGG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGACTGAGGCTGGGG 120
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DNA; 564
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches 155;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 171; DB 11;
Pred. No. 1.2e-21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dumont J,
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26 MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 564 BP; 75 A; 103 C; 227 G; 159 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fetal liver. The presen probe of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; SEQ ID NO 8579; 639pp + sequence listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human fetal liver -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-AUG-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; foetal liver; gene expression; single exon nucleic acid probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human foetal liver single exon nucleic acid probe #8579.
                                                                                                                                                                        195
                                                                                                                                                                                                                                      135
361 TGAAGCTGAGGCTGGGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATG 408
                                   314 CTGTAGCTGGTGCTGTGGCTGGGCTGGTGGCTGTGGCTCTGACTGGCCCTGTGG 373
                                                                301 CTGGAGCTGGAGCTGANGCTGGGGCTGGGGGCTGANCTGGGGCTGAGGCTCCNGC 360
                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                    121 CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTGGGG 180
                                                                                                                                                                                                                                                                                                                                                                        16
                                                                                                                                                                                                                                                                                                   76 CTGTGGCTGTGAGTGGCACTGTGGCTGTGGCTATGACTGATACTGTGTCT-TGG 134
                                                                                                                                                                                                                                                                                                                                    51 CTGGGGCTGGGGCTGAGGCTGGGGCTGGGGCTGGGGCTGGGGACTGAGGCTGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                       1 CTGAGGCTGGGGCTGGGGGCTGAGGCTGGAGCTGGGACTGAGGCTGGGGCTGGGG 60
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                                                                                                   CTGTGGCTCTGACTGGCCTGTGGCTGTGGCTGCTGTGGATGTAGCTGGCACTGTGG 313
                                                                                                                                                                                       CTGAGGTTGGGGCTGGGGCTGAGGCTGAGGCTGGGGCTAAGGG 240
                                                                                                                                 CTNAGGCTGAGGTTGGGGGCTGGGGCTGACGCTGGGGCTGAGGCTNGGNCTGAGG 300
                                                                                                                                                                    CTATGACTGGTACTGTCT-TGGCTGGTGCTATGGCTGTAGCTGGCACTGTGGCTGTGG 253
                                                                                                                                                                                                                                      CTGGTGCTATGGCTGGCTGGCACTGTGGCTGTGGCTGTGAGTGGCACTGTGGCTGTGG 194
                                                                                                                                                                                                                                                                                                                                                                        CTGTGGCTATGGCTGGCACTGTGACTGTGGCTGTGGCTGTGGCTCTGACTGGCC 75
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2000US-0207456
2000US-0508408
2000US-0632366
2000US-0234687
2000US-0238659
2000US-0238659
2000US-0238653
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64.7%; Pre
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 165.8;
Pred. No. 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rank DR;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 22; Length 564;
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
                                                                                                                                                                                                                                                                                                              The present invention relates to single exon nucleic acid probes for measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; gene expression; heart; microarray; vascular system; probe; cardiovascular disease; hypertension; cardiac arrhythmia;
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                                                                                                                                                                                                                      Sequence 564 BP; 75 A; 103 C; 227 G; 159 T; 0 other;
                                                                                                                                                                                                                                                   at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                    Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                   congenital heart disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID No 7022; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Single exon nucleic acid probes for analyzing gene expression in human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-488899/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Penn SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MOLE-) MOLECULAR DYNAMICS INC
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 121 CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTGGGG 180
                                                 61 CTGGGGCTGGGGCTGGGGCTGGGGGCTGGGGCTGGGGCTGGGGCTGGGG 120
                                                                                             76 CTGTGGCTGTGGCTGTGAGTGGCACTGTGGCTGTGGCTATGACTGATACTGTGTCT~TGG 134
                                                                                                                          1 CTGAGGCTGGGGCTGGGGCTGAGGCTGGAGCTGAGGCTGGGGCTGGGG 60
                                                                                                                                                                            Cocal
                                                                                                                                                          264; Conservative
                                                                                                                                                                        Similarity
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2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
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                                                                                                                                                                      33.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chen W, Rank DR;
                                                                                                                                                          0; Mismatches 142; Indels
                                                                                                                                                                          Score 165.8; DB 22; Pred. No. 9.5e-21;
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Query Match
Best Local Similarity
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                             The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples, which may enable the diagnosis and improved treatment of nervous system diseases such as Alzhehmer's disease, multiple sclerosis, schizophrenia, epilepsy and cancers. The present sequence is one of the probes of the
                                       Sequence 564
                                                                                                                                                                                                                     Single exon nucleic acid probes for analyzing gene expression in human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; brain expressed exon; gene expression analysis; probe; microarray; Alzheimer's disease; multiple sclerosis; schizophrenia;
                                                                                                                                                                            Example 4; SEQ ID NO: 8543; 650pp + Sequence Listing; English.
                                                                                                                                                                                                                                                   WPI; 2001-483446/52.
                                                                                                                                                                                                                                                                                                                                     04-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200157275-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   epilepsy; cancer;
                                                                     invention.
                                                                                                                                                                                                                                                                               Penn SG,
                                                                                                                                                                                                                                                                                                         (MOLE-) MOLECULAR DYNAMICS INC.
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2000US-0207456.
; 2000US-0608408.
; 2000US-0632366.
; 2000US-0234687.
; 2000US-023659.
; 2000US-023659.
                                     BP; 75 A; 103 C; 227 G; 159 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                            2001WO-US00667
 33.2%;
                                                                                                                                                                                                                                                                              Chen W,
Score 165.8; DB 22; Pred. No. 9.5e-21;
                                                                                                                                                                                                                                                                               Rank DR;
            Length 564;
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The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the hu Example 4; SEQ ID NO: 8992; 658pp + Sequence Listing; English.

from genomic sequences expressed in the human

analyzing gene expression in human bone marrow

Human genome-derived single exon nucleic acid probes useful for

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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                       Human; bone marrow expressed exon; gene expression microarray; cancer; leukaemia; lymphoma; myeloma;
                                                                                                                                                                                                                                                                                                                                                                       Human bone marrow expressed single exon probe SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                               06-NOV-2001
                                                                                        WPI; 2001-488900/53.
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                                                                                                                                                                                                                                                                                                                   Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                           AAK34435 standard; DNA; 564 BP
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                                                                                                                                   MOLECULAR DYNAMICS INC
                                                                                                             Hanzel DK,
                                                                                                                                                        ; 2000US-0180312
2000US-0207456
; 2000US-0608408
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                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                             Chen W, Rank DR;
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26-MAY-2000;
30-YUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 564 BP; 75 A; 103 C; 227 G; 159 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Probe #6667 for gene expression analysis in human cervical cell sample.
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                           Penn SG,
                                                                                                                                                                                                                                                                                                                                                                      30-JAN-2001; 2001WO-US00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200157278-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cervical cancer; ss.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAI16734 standard; DNA; 564 BP
                                                                                    (MOLE-) MOLECULAR DYNAMICS INC
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                           Hanzel DK,
                                                                                                                                                                  2000US-0180312.
2000US-0207456.
2000US-0608408.
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                                                                                                                                             2000GB-0024263
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                           Chen W,
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Pred. No. 9.
                           Rank DR;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human cervical epithelial cells \boldsymbol{\cdot}
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30-JAN-2001; 2001WO-US00663.
                                                         09-AUG-2001
                                                                                                                  WO200157272-A2
                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                           Probe; microarray; human; placenta; antenatal diagnosis; genetic disorder; ss.
                                                                                                                                                                                                                                                                                                                   Probe #8847 used to measure gene expression in human placenta sample
                                                                                                                                                                                                                                                                                                                                                                            17-OCT-2001
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Similarity 64.78;
                                                                                                                                                                                                                                                                                                                                                                         (first entry)
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                               DNA encoding novel human diagnostic protein #20107
    Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
                                                                                                                                                                               AAS84303 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 25; SEQ ID No 8847; 654pp; English.
                                                                                                         13-FEB-2002
                                                                                                                                               AAS84303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 564 BP; 75 A; 103 C; 227 G; 159 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placenta. The probes are useful for antenatal diagnosis of human genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human placenta -
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                                                                                                                                                                                                                                                                                                    361 TGAAGCTGAGGCTGAGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATG 408
                                                                                                                                                                                                                                                                             374 CTGTGGCTATGACTGGCACCGTGGCCGTGGCTGTGGTGCTGGTG 421
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                                                                                                      (first entry)
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2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
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64.7%; Pred. No. 9.5e-21;
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                                                                                                                                                                                  569 BP
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CC Note: The sequence data for this patent did not appear in the printed CC specification, but was obtained in electronic format directly from WIPO CR at the wino intrinity with and creating and contact of the invention.
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 569 BP; 163 A; 96 C; 211 G; 99 T; 0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess hiddinare(+).
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23-AUG-2000; 2000US-0649167
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    268
                                                                                                                                                                                                                                                                                                                 28 GCTGGGGCTTGGAGCTGAAGTTGATGCTAGGGCTGAAGCAAGAATGGGAATTGAG
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GCTGAGGTTGAGGCCAGAACTGGAGCTAAAGTTGAGGCTGGAACCGGAGCTGAGGTTGAG
                                      GCTGGGGCTGGNGCTGACGCTGGGGCTGAGGCTNGGNCTGAGGCTGGAGCTGGGGCTGAN 317
                                                                                                    ACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTAGGGCTNAGGCTTAGGCTTGGG 257
                                                                                                                                                           GCTGGGGCTGAGGCTGGAGCTGAAGAAGAGGTTATAGCTGCAGCTGAAGTAGAGGCTGGA
                                                                                                                                                                                  GCTGGGACTGAGGCTGGGGACTGAGGCTGGGGCTGGGGCTGAGGTTGGGGCTGGG 197
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                                                                             ACTGAAGCTGAGACTGAGGCTGAGGCTGAAACTGGAGCTAAGGGTGAGGCTGGAACTGGA 267
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Pred. No. 2.5e-
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23-AUG-2000; 2000US-0649167
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            318 GCTGGGGCTGNNG----CTGANCTGGGGCTGAGGCTCCNGCTGAAGCTGAGGCT 373
ftp.wipo.int/pub/published_pct_sequences
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New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations {\bf r}
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23-AUG-2000; 2000US-0649167.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             148
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    448 GACCTCCAGCAAATTCCAACAGACCTGCAGCTGAGG 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    434 NGGCTNNCNTCCNNGACAAANANTTNNAACTTGNGG 469
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGGTTGAAGGTGGAAGTGGAGCCGAAGCTAGAGCCTCTGCTGGTGATACCCAGGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATGCTTGNCTNANAATGNGNATGNNCTG 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGGAACTGGAGTTAAGGTTGCCGGAAGTGGAGCTGAGGTTGAGGCTGGAACTGAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGGGGCTGGGGCTGNNG----CTGANCTGGGGCTGAGGCTCCNGCTGAAGCTGAGGCT 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGAGGTTGAGGCCAGAACTGGAGCTAAAGTTGAGGCTGGAACCGGAGCTGAGGTTGAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGGGGCTGGGGCTGGGGCTGGGGCTGAGGCTGGGGCTGAGGCTGGG 137
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTGAAGCTGAGACTGAGGCTGAAGCTGAAACTGGAGCTAAGGGTGAGGCTGGAACTGGA
                                                                                                                                        2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             268;
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                                                                                                                                                                                                            Tang YT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches 184; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 163.4; DB 23; Length 1209; Pred. No. 2.4e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to isolated polynucleotide (I) and CC polymerptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II) The Color identifying expressed genes. (I) is useful in gene therapy techniques CC to restore normal activity of (II) or to treat disease states involving CC (II). (II) is useful in gene therapy techniques CC to restore normal activity of (II) or to treat disease states involving CC (II). (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical CC imaging of sites expressing (II). (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. CC The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations CC responsible for genetic disorders or other traits to assess biodiversity CC and to produce other types of data and products dependent on DNA and CC amino acid sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of the invention.

CC reference of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 268
  23-MAY-2001
                                            AAF28060;
                                                                                 AAF28060 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1209 BP; 424 A; 218 C; 350 G; 217 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID No 17205; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 responsible for genetic disorders or other traits and to assess
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                                                                                                                                                                                  448 GACCTCCAGCAAATTCCAACAGACCTGCAGCTGAGG 483
                                                                                                                                                                                                                        434 NGGCTNNCNTCCNNGACAAANANTTNNAACTTGNGG 469
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28 GCTGGGGCTGGCGTTGGAGCTGAAGTTGATGCTAGGGCTGAAGCAAGAATGGGAATTGAG 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTAGGGCTNAGGCTGAGGTTGGG 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGAGGCAAGAATGGTGACAGAAGCTGGGGTTGAAACTGAGGCAAGGATGGGGGTTGGA 147
                                                                                                                                                                                                                                                                                                  GGGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATGCTTGNCTNANAATGNGNATGNNCTG 433
                                                                                                                                                                                                                                                                                                                                                                                 GCTGGGGCTGGGGCTGNNG----CTGANCTGGGGCTGAGGCTCCNGCTGAAGCTGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGAGGTTGAGGCCAGAACTGGAGCTAAAGTTGAGGCTGGAACCGGAGCTGAGGTTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGGGGCTGGNGCTGACGCTGGGGCTGAGGCTNGGNCTGAGGCTGGAGCTGGAGCTGAN 317
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGGGACTGAGGCTGGGGCTGGGACTGAGGCTGGGGCTGAGGTTGGGGGCTGGG 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGAGGCTGGG 137
                                                                                                                                                                                                                                                             GAGGTTGAAGGTGGAAGTGGAGCCGAAGCTAGAGCCTCTGCTGGTGATACCCAGGCAGTG
                                                                                                                                                                                                                                                                                                                                            GCTGGAACTGGAGTTAAGGTTGCCGGAAGTGGAGGCTGAGGGTTGAGGCTGGAACTGAAGCT
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    (first entry)
                                                                              CDNA; 10347
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                5866 GCTGGGGCTGGCGTTGGAGCTGAAGTTGATGCTAGGGCTGAAGCAAGAATGGGAATTGAG 5807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention provides the protein and coding sequences of the human 07CG27 oncogene. This gene is found at the HPC1 region of chromosome 1. The sequences can be used in the diagnosis and identification of treatments for prostate cancer. The present sequence
                                                            5566 GCTGGAACTGGAGTTAAGGTTGCCGGAAGTGGAGCTGAGGTTGAGGCTGGAACTGAAGCT 5507
                                                                                                                                           5626 GCTGAGGTTGAGGCCAGAACTGGAGCTAAAGTTGAGGCTGGAACCGGAGCTGAGGTTGAG 5567
                                                                                                                                                                                                                     5686 ACTGAAGCTGAGACTGAGGCTGAAGCTGAAACTGGAGCTAAGGGTGAGGCTGGAACTGGA 5627
                                                                                                                                                                                                                                                                                                    5746 GCTGGGGCTGAGGCTGGAGCTGAAGAAGAGGTTATAGCTGCAGCTGAAGTAGAAGCTGGA 5687
                                                                                                                                                                                                                                                                                                                                                                                 5806 GCTGAGGCAAGAATGGTGACAGAAGCTGGGGTTGAAACTGAGGCAAGGATGGGGGTTGGA 5747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10347 BP; 3325 A; 2451 C; 2229 G; 2342 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          identification of treatment the 07CG27 coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 2; Page 79-91; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tavtigian SV, Swedlund B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-AUG-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human 07CG27 gene cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel human prostate cancer marker gene termed as 07CG27 gene, useful for screening mutations in the gene in diagnosis of a predisposition to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-226682/23.
P-PSDB; AAB35408.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MYRI-) MYRIAD GENETICS INC.
(HOSP-) HOSPITAL FOR SICK CHILDREN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-AUG-2000; 2000WO-US23291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oncogene; ss.
374 GGGGCNTAACGCTGAGCTNGNNGC 397
                                                                                                                                                                                                                                                                                                                           138 GCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTGAGGTTGGGGCTGGG 197
                                                                                                 318 GCTGGGGCTGGGGCTGNNG----CTGANCTGGGGCTGAAGCTCCNGCTGAAGCTGAAGCT 373
                                                                                                                                                                                                                                                          198 ACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTAGGGCTNAGGCTGAGGTTGGG 257
                                                                                                                                                                              258 GCTGGGGCTGGACGCTGGGGCTGAGGCTNGGNCTGAGGCTGGAGCTGGGGCTGAN 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78 GCTGGGGCTGGGGCTGGGGCTGGGGACTGAGGCTGGGGCTGGGGCTGAGGCTGGG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
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225..8684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product= "07CG27 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 161.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred.
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5506 GAGGTTGAAGGTGGAAGTGGAGCC 5483

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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                       probe of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200157277-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; foetal liver; gene expression; single exon nucleic acid probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human foetal liver single exon nucleic acid probe #21118.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABA72813 standard; DNA; 368
                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 4; SEQ ID NO 21118; 639pp + sequence listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-483447/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABA72813;
                                                                                                                                                                                                                                                                                                                 Sequence 368 BP; 29 A; 76 C; 149 G; 114 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human genome-derived single exon nucleic acid probes useful analyzing gene expression in human fetal liver -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Penn SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MOLE-) MOLECULAR DYNAMICS INC
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                                                                                            121
 195
                            181 CTGAGGTTGGGGCTGGGACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTAGGG 240
                                                                                                                                                                                        17
                                                                                                                                                    61 CTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGACTGAGGCTGGGG 120
                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                    1 CTGAGGCTGGGGCTGGGGCTGGGGCTGGAGCTGGGACTGAGGCTGGGGCTGGGG 60
                                                                           CTGGGGCTGAGGCTGGGGACTGAGGCTGGGGCTGGGGACTGAGGCTGGGGCTGGGG 180
CTGTGGCTCTGACTGGCCTGTGGCTGCTGCTGCTGGATGTAGCTGGCACTGTGG
                                                            CTATGACTGGTACTGTGTCTTGG-CTGGTGCTATGGCTGTAGCTGGCACTGTGGCTGTGG
                                                                                                                         CTGGTGCTATGGCTGTAGCTGGCACTGTGGCTGTGGCTGTGAGTGGCACTGTGGCTGTGG 135
                                                                                                                                                                                      CTGTGGCTGTGGCTGTGGCACTGTGGCTGTGGCTATGACTGATACTGTGTCT-TGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hanzel DK,
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2000US-0207456.

2000US-0608408.

2000US-0633366.

2000US-0234687.

2000US-0236359.
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                                                                                                                                                                                                                                                               29.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chen W,
                                                                                                                                                                                                                                                                 Score 148.4; DB 22;
Pred. No. 1e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rank DR;
                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                    115; Indels
                                                                                                                                                                                                                                                                                 Length 368;
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                                                            194
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RESULT 14
ABA38433
ID ABA38
XX ABA38
XX Probe
XX Probe
XX Human
KW Cardi
KW Cardi
KW Conge
XX WO200
XX WPI;
XX WPI;
XX WPI;
XX WPI;
XX Singl
PT heart
XX Clain
XX CC Grobe
CC Grobe
CC Grobe
CC Speciol
CC Specio
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                                                                                                                                             Query Match
Best Local :
                                                                                                                  Matches
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to single exon nucleic acid probes for measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; gene expression; heart; microarray; vascular system; probe;
cardiovascular disease; hypertension; cardiac arrhythmia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Probe #16899 for gene expression analysis in human heart cell sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABA38433;
                                                                                                                                                                                                                               Sequence 368 BP; 29 A; 76 C; 149 G; 114 T; 0 other;
                                                                                                                                                                                                                                                                                                                 Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 4; SEQ ID No 16899; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Single exon nucleic acid probes for analyzing gene expression in human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-488899/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Penn SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (MOLE-) MOLECULAR DYNAMICS INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                congenital heart disease; ss.
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                                                                                                                                                                                                                                                                                       at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                               congenital heart disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
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CTGGAGCTGGGGCTGANGCTGGGGCTGNNGCTGANCTGGGGCTGA 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGTAGCTGGTGACTGTGGCTGTGGCTGGTGGCTGTGGCTCTGACTGGCCCTGTGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTNAGGCTGAGGTTGGGGGCTGGGGCTGACGCTGGGGCTGAGGCTNGGNCTGAGG
                                                                                                                  234;
                                                                                                                                             Similarity
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                                                                                                                  Conservative
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2000US-0207456.

2000US-0608408.

2000US-0632366.

2000US-0234687.

2000US-0236359.
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                                                                                                                                                29.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chen W,
                                                                                                                  0;
                                                                                                                                                                       Score 148.4;
                                                                                                                                                   Pred.
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                                                                                                                  Mismatches
                                                                                                                                                   No.
                                                                                                                                                                              DB 22;
                                                                                                                  115; Indels
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                                                                                                                      Gaps
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RESULT 15
AAK2124A
ID AAK2124A
ID AAK21
XX AAK21
XX O5-NO
DY 05-NO
DY U5-NO
DY Human
KW Human
KW Human
KW Human
KW Homo
XX Hom
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26-MAY-2000;
30-JUN-2000;
                                                                               The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples, which may enable the diagnosis and improved treatment of nervous system diseases such as Alzheimer's disease, multiple sclerosis, schizophrenia, epilepsy and cancers. The present sequence is one of the probes of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; brain expressed exon; gene expression analysis; probe; microarray; Alzheimer's disease; multiple sclerosis; schizophrenia;
                                                                                                                                                                                                                                                                                                                                                                      single exon nucleic acid probes for analyzing gene expression in human
                                                                                                                                                                                                                                                                                   Example 4; SEQ ID NO: 21235; 650pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-483446/52
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                epilepsy; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human brain expressed single exon probe SEQ ID NO: 21235.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Penn SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MOLE-) MOLECULAR DYNAMICS INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 CTGGAGCTGGGGCTGANGCTGGGGCTGANCTGGGGCTGA 351
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGAGGTTGGGGCTGGGGCTGAGGCTGAGGCTGAGGCTGGGGCTAGGG 240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; 2000US-0180312
2000US-0207456
; 2000US-0608408
; 2000US-0632366
; 2000US-0234687
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Sequence 368 BP; 29 A;

76 C; 149 G; 114 T; 0 other;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 29.7%;
Best Local Similarity 66.7%;
315 CTGTGGCTATGACTGGCACCGTGGCCGTGGCTGTGGCTGGTGTGA
                                                                                                                                            195 CTGTGGCTCTGACTGGCCTGTGGCTGTGGCTGCTGGTGGATGTAGCTGGCACTGTGG
                                                                                                                                                                                 181
                                                                                                                                                                                                                                                         121
                                                                      255 CTGTAGCTGGTGCTGTGACTGTGGCTGTGGCTGTGGCTCTGACTGGCCCTGTGG
                                                                                                        241 CTNAGGCTGAGGTTGGGGCTGGGGCTGGNGCTGACGCTGGGGGCTGAGGCTNGGNCTGAGG 300
                                                                                                                                                                                                                     136 CTATGACTGGTACTGTGTCTTGG-CTGGTGCTATGGCTGTAGCTGGCACTGTGGCTGTGG
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                                CTGGAGCTGGGGCTGANGCTGGGGCTGGGGCTGANCTGGGGCTGA 351
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Search completed: October 10, 2002, 15:18:11 Job time : 91 secs

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Result
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     Query
Score Match Length DB
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                                                                    Small cell lung cancer associated antigens and uses therefor patent: WO 0153349-A 17 26-JUL-2001; LUDWIG INSTITUTE FOR CANCER RESEARCH (US); MEMORIAL SLOAN-KETTERING CANCER CENTER (US); CORNELL RESEARCH FOUNDATION,
                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1232)
                                                                                                                                                                                                                                                   AX201596 1232 bp
Sequence 17 from Patent W00153349.
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                                                                                                                                                Stockert, E., Scanlan, M.J., Jager, D., Old, L.J., Gure, A.O. and
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AC098110 Rattus no
AF189263 Mus muscu
AF131866 Mus muscu
AC015260 Drosophil
AE003574 Drosophil
Continuation (4 of
AF189265 Mus muscu
AL117207 Caenorhab
AL1021568 Caenorhab
AF189265 Rattus no
AC079167 Mus muscu
U62317 Homo sapien
AF255385 Rattus no
Continuation (2 of
AC096470 Rattus no
AC0101718 Mus muscu
AC012524 Homo sapi
AC012524 Homo sapien
AC025324 Homo sapien
AC015261 Drosophil
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M11043 Mouse DNA f
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AL032679 Caenorhabdi
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12 1 (bases 1 to 54987)

13 Muzny, D.M., Adams, C., Adio-Oduola, B., Ali-Osman, F.R., Allen, C., Alsbrooks, S.L., Amarattunge, H.C., Are, J.R., Banks, T., Barbaria, T., Barboxoks, S.L., Amarattunge, H.C., Re, B., Banks, T., Bouck, J., Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Bouck, J., Bowie, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Buhay, C., Burchl, R., Brown, M., Bryant, N.P., Buhay, C., Carcen, T., Charet, M., Cavazos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R., Carter, M., Cavazos, S.R., David, R., David, R., Deland, C.D., Cox, C., Coyle, M.D., Dathorne, S.R., David, R., Davi
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAAGCTGAGGCTGGGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATGCTTGNCTNANAA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGACTGAGGCTGGGGCTGGGG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGACTGAGGCTGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Norway rat.
Rattus norvegicus
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus clone CH230-6C1, 30 unordered pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC094895.3 GI:17941690
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HTGS_PHASE1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243 t
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA linear HTG 20-DEC-2001
*** SEQUENCING IN PROGRESS ***,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  267 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1232;
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                                                         Hale, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
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AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hernandez, J., Hernandez, O., Hodgson, A., Hogues, M., Holloway, C., Hollins, B., Homsi, F., Howard, S., Huber, J., Hulyk, S., Hume, J., Jackson, L.E., Jacobson, B., Jiar, Y., Johnson, R., Jolivet, S., Joudah, S., Karlsson, E., Kelly, S., Khan, U., King, L., Korvah, J., Kovar, C., Kratovic, J., Kureshi, A., Landry, N., Leal, B., Lewis, L., Li, J., Li, Z., Lichtarge, O., Lieu, C., Liu, J., Liu, W., Louiseged, H., Lozado, R. J., Lu, X., Lucier, A., Lucier, R., Luna, R., Ma, J., Maheshwari, M., Mapua, P., Martin, R., Martindale, A., Mayna, E., Martinez, E., Massey, E., Mawhiney, E., McLeod, M. P., Meador, M., Martinez, E., Massey, E., Mawhiney, E., McLeod, M. P., Meador, M., Martinez, E., Massey, E., Mawhiney, E., McLeod, M. P., Meador, N., Mguyen, A., Nguyen, N., Nickerson, E., Nwokenkwo, S., Oguh, M., Okwuonu, G., Oragunye, N., Oikdon, E., Nece, A., Payton, B., Peery, J., Perez, L., Peters, L., Pickens, R., Primus, E., Pull, L., Oulles, M., Okwuonu, G., Oragunye, N., Oiddo, R., Pace, A., Payton, B., Peery, J., Perez, L., Peters, S., Scott, G., Shen, H., Shooshtari, N., Sisson, I., Sodergren, E., Sonaike, T., Sparks, A., Stanley, H., Shooshtari, N., Stone, H., Sutch, A., Tabor, P., Tamerisa, A., Tanerisa, K., Tang, H., Tansey, J., Taylor, P., Tanerisa, A., Tanerisa, A., Tang, H., Tansey, J., Taylor, C., Taylor, P., Telfrod, B., Thomas, N., Mall, R., Wang, S., Wallans, G., Williamson, A., Walezyk, R., Wooden, S., Wolley, K., Wu, C., Wu, Y., Wu, Y.F., Zhou, J., Zorrilla, S., Nelson, D., Pired, S., Park, S., Shen, S., Mard, S., Marren, R., Washington, C., Weinstock, G. and Gibbs, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             findPhrapList
Consensus quality: 43361 bases at least Q40
Consensus quality: 47831 bases at least Q30
Consensus quality: 51743 bases at least Q20
Estimated insert size: 42188; sum-of-contigs estimation
Quality coverage: 0x in Q20 bases; agarose-fp estimation
Quality coverage: 0.4x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Worley, K.C.

Direct Submission

Submitted (15-SEP-2001) Human Genome Sequencing Center, Department Submitted (15-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On Dec 20, 2001 this sequence version replaced gi:15667954.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

NOTE: This is a 'working draft' sequence. It currently consists of 30 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 54987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Web site: http://www.hgsc.bcm.tmc.edu/Contact: hgsc-help@bcm.tmc.edu Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center project name: GBQZ
Center clone name: CH230-6C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Assembly program: Phrap; version 0.990329First call to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center: Baylor College of Medicine Center code: BCM
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    gap of unknown contig of 2569 gap of unknown contig of 2223 gap of unknown contig of 2892 contig of 2892 gap of unknown
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contig of 2214 bp
gap of unknown lend
contig of 2965 bp
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BASE COUNT
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Best Local 9
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/db_xref="taxon:10116"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                       57.9%; Score 289.4; DB 2
82.8%; Pred. No. 1.7e-40;
tive 0; Mismatches 66
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of 168
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of 1621
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of 2001
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of 2119
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                                                                                                                                                                                                                                                        5 (bases 1 to 143720)
Han,J., Montgomery,K.T., Grills,G., Chiu,D., Decker,J., Fusina,M.,
Goltz,J., Haider,A., Hall,L., Ioshikhes,I.P., Lee,E., Long,J.,
Perera,A., Shim,C., Thomas,E. and Kucherlapati,R.
Direct Submission
Submitted (25-JAN-2002) Harvard Partners Center for Genetics and
Genomics, Harvard Medical School, 65 Landsdowne St., Cambridge, MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KCUB/332 143720 bp DNA linear ROD
Mus Musculus Chromosome 2 RP23-58L18, complete sequence
AC087332
                                                                                                                                                                                                 02139, USA
On Feb 1, 2001 this sequence version replaced g1:12484303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (04-JAN-2002) Harvard Partners Center for Genetics and Genomics, Harvard Medical School, 65 Landsdowne St., Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Han,J., Montgomery,K.T., Grills,G., Chiu,D., Decker,J., Fusina,M., Goltz,J., Haider,A., Hall,L., Ioshikhes,I.P., Lee,E., Long,J., Perera,A., Shim,C., Thomas,E. and Kucherlapati,R.

Direct Submission
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4 (bases 1 to 143720)
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Einstein College of Medicine Genome Center, 1300 Morris Park Ave.,
Bronx, NY 10461, USA
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Einstein College of Medicine Genome Center, 1300 Morris Park Ave.
Bronx, NY 10461, USA
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 143720)
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3 (bases 1 to 143720)
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Contact:
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                                                       //wchanning.bwh.harvard.edu:9088/hpcgg/jsp/hpcgg/Sequence/mous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
gnktm@capecod.bwh.harvard.edu
                                                                                                                                                                            Genome Center
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Repeats are identified using RepeatWasker (A. Smit and P. Green, unpublished.) for Human and Mouse sequences.

Genes and Regions of sequence similarity are identified by BLAST (Nuc. Acids Res. 25:3389-3402) similarity (expect < 1e-34) to EST and cDNA sequences in Unigene. Genes demonstrate at least two exons flanked by consensus splice sites that maintain sequence continuity matches are annotated as similar.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLONE LENGTH: This sequence represents the entire insert of this clone unless otherwise noted. If there are overlapping clones, the overlaps are noted in the beginning and end of the Features listing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contig length: 143720 < 40: 8.349e-05 Fraction of Phrap value < 40: 8.349e-05 Error Rate in Consed: 0.00 per 10,000 bases Number of N's in consensus: 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center project name: AJF
sequencing vector: pvC18; 108752
Chemistry: Dye-terminator Big Dye; 1008
Assembly program: Phrap version 0.990319
Contig length: 143720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QUALITY OF INDIVIDUAL BASES: This sequence meets stringent quality standards - estimated average error rate is less than I per 10,000 bases using the Consed quality parameters. Regions that do not meet this requirement are annotated as Low Quality.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCING READ COVERAGE: Attempts are made to complete double stranded sequence for all regions. All sequence is completed to a standard of coverage with a minimum of 3 reads with no ambiguities. If the sequence coverage for a region does not meet this standard, it is indicated in the annotation as Low Coverage. Low coverage linkages are verified by PCR product size verification or forward and reverse reads from clones which span verification of forward and reverse reads from clones which span
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/rpt_family="B4A"
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3834. .3914
                                                                                                           /rpt_family="(TATATG)n"
complement(3381. .3819)
                                                   /rpt_family="(TTC)n"
                                                                                                                                                                 rpt_family="L1MB7"
                                                                                                                                                                                                    rpt_family="L3"
                                                                                                                                                                                                                           /organism="Mus musculus"
/db_xref="taxon:10090"
2373. .2464
                                                                                                                                                                                                                                                                                                     Location/Qualifiers
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                                                 /rpt_family="(TG)n"
complement(40705. .40894)
                                                                                  /rpt_family="L1M4"
40273. .40321
                                                                                                                      /rpt_family="B3A"
39771. .40066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="B2_Mm1" 33687. .33709
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complement(19924. .2004
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complement(4957, .5065)
                                                                                                                                                                                                       39406
                                                                                                                                                                                                                                                                                 /rpt_family="L1M4"
38396, ,38754
                                                                                                                                                                                                                                                                                                                                                          /rpt_fami
36830. .3
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36558. .3
                                                                                                                                                                                                                                                                                                                                                                                                                           complement(35888
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33524. .33686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="(TA)n"
30264. .30401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_fami
29704. .2
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27887. .27921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="BIF"
26227, .26600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="(CAGAGA)n"
complement(10946. .1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_famil 4529. .456
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/rpt_family="B3A"
complement(4233, .4449)
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33878. .34603
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27851. .27887
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11502. .11580
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10774. .10795
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7862. .7906
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7208. .7231
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7137, 7206
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                                                                                                                                                                                                                                                          fami
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2. .17361
                                                                                                                                                                                                                      family="PB1D10"
                                                                                                                                                                                                                                                                                                                                    family="PB1D7"
           57.0%; Score 285; DB 10; Length 143720;
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                                                                                                                                                            amily="(GGA)n"
.39650
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.29733
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26468 CTGGGCCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26288 CTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCCTGGGGCTGGGGCTGGGG 26347
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 CTGAGGTTGGGGCTGGGACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTGGGGCTAGGG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 CT6GGGCTGAGGCTGGGGCTGGGGACTGAGGCTGGGGACTGAGGCTGGGGCTGGGG 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CTGAGGCTGGGGCTGGGGGCTGAGGCTGGAGCTGGGACTGAGGCTGGGGCTGGGG 60
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                                                                                                                                                                          Assembly program: XGAPA; version 4.5
Chemistry: Dye-terminator Big Dye; 100% of reads
Consensus quality: 219697 bases at least Q40
Consensus quality: 229081 bases at least Q20
Consensus quality: 220081 bases at least Q20
Insert size: 220261; sum-of-contigs
Insert size: 213159; 11.3% error; agarose-fp
Quality coverage: 13.01x in Q20 bases; sum-of-contigs Quality coverage: 13.51x in Q20 bases; agarose-fp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (23-JAN-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk On Feb 1, 2002 this sequence version replaced gi:18307364.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL670227 220761 bp DNA linear HTG 30-JAN Mus musculus chromosome 4 clone RP23-317N1, *** SEQUENCING IN PROGRESS ***, in unordered pieces.
                                     * NOTE: This is a 'working draft' sequence.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center project name: bM317N1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HTG; HTGS_PHASE1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: humquery@sanger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web site:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center code: SC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center: Wellcome Trust Sanger Institute
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be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (sites)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://www.sanger.ac.uk
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0; Mismatches
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Db 119954 CTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGGCTGAGGCTGAGGGCTGAGGCTGAGGGCTGAGGGCTGAGGGCTGAGGCTGAGGCTGGAGGCTGAG
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                ORGANISM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOCAT
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            Gallus gallus
                                                                                                                                                                                   AF218784 2801 bp DNA linear VRT 05-MAF
Gallus gallus MHC Rfp-Y class I alpha chain (YFVI) pseudogene.
YFV-Y-FVw*7 alleie, complete sequence.
                                                                                                                    AF218784
AF218784.1
                                                  chicken
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57530 a 54793 c 52961 g 54975 t
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fragment_chain:1"
150271..15659
/note="assembly_fragment:01326
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/chromosome="4"
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                                                                                                        196 GGACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTAGGGCTNAGGCTGAGGTTG 255
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                                                                 297 GGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTG
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Afanassieff,M., Goto,R.M., Ha,J., Sherman,M.A., Zhong,L.,
Auffray,C., Coudert,F., Zoorob,R. and Miller,M.M.
At Least One Class I Gene in Restriction Fragment Pattern-Y
At Least One Class I Gene Cluster in the Chicken, Is
(Rfp-Y), the Second MHC Gene Cluster in the Chicken, Is
(Rfp-Y), the Second MHC Gene Cluster in the Chicken, Is
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Guillemot, F., Biliault, A., Pourquie, O., Behar, G., Chausse, A.M.,
Zoorob, R., Kreibich, G. and Auffray, C.
A molecular map of the chicken major histocompatibility complex:
the class II beta genes are closely linked to the class I genes and
the nucleolar organizer
EMBO J. 7 (9), 2775-2785 (1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (23-DEC-1999) Department of Molecular Biology, Beckma Research Institute of the City of Hope National Medical Center, 1450 E. Duarte Road, Duarte, CA 91010-3011, USA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae; Gallus.
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Afanassieff, M., Zoor
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J. Immunol. 166 (5), 3324-3333 (2001)
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/772 c 1019 g
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141. .434
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jolin(120. .471,598. .858,1104.
2045. .2077,2236. .2268,2454.
/gene="YFVI"
/citation=[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="MHC Rfp-Y class I alpha chain"
/allele="Y-FVIw*7"
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/db_xref="taxon:9031"
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                                                                                                                                                                                                                                                                                                                                                                                                                Consensus quality: 160964 bases at least 040
Consensus quality: 164326 bases at least 030
Consensus quality: 16482 bases at least 020
Estimated insert size: 200000; agarose pestimation
Estimated insert size: 170624; sum-of-contigs estimation
Quality coverage: 10.97 in 020 bases; agarose-IP estimation
Quality coverage: 12.86 in 020 bases; sum-of-contigs estimation.

* NOTE: This is a 'working draft' sequence. It currently
* consists of 17 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
* be preserved.
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Submitted (09-DEC-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
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DOE Joint Genome Institute.
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1 (bases 1 to 172224)
DOE Joint Genome Institute.
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Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                    Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Hominidae; Homo. Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 118562)

DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                                                                                                                                                                                                                                                       AC026443 118562 bp DNA linear PRI 15-AUG-
Homo sapiens chromosome 5 clone CTD-2296H22, complete sequence
                          DOE
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Direct Submission
                                                                                               Direct Submission
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Joint Genome Institute
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/db_xref="taxon:10090"
/clone="RP32-31016"
/clone="Ibb="RPCI mouse BaC library 23"
/clone_1ib="RPCI mouse BaC library 23"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drive, Walnut Creek, CA 94598, USA
4 (bases 1 to 118562)
DOE Joint Genome Institute and Stanford Human Genome Center.
                                     ACO25183 I34909 bp DNA 11
HOMO SAPLENS Chromosome 5 Clone CTD-2194D22,
SEQUENCE, 11 ordered pieces.
ACO25183 GI:13677019
ACO25183 GI:13677019
HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_ACTIVEFIN.
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DOE Joint Genome Institute and Stanford Human Genome Center.
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Quality: Phrap Quality >=40 99.3% of Sequence:
Estimated Total Number of Errors is 0.6.
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30552 c 30372 g 30143 t
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/db_xref="taxon:9606"
/chromosome="5"
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Consensus quality: 131684 bases at least Q30
Consensus quality: 131684 bases at least Q30
Consensus quality: 133080 bases at least Q30
Consensus quality: 133080 bases; at least Q30
Estimated insert size: 153790: agarose-fp estimation
Estimated insert size: 13300; sum-of-contigs estimation
Quality coverage: 5.58 in Q20 bases; sum-of-contigs estimation
Quality coverage: 6.33 in Q20 bases; sum-of-contigs estimation

**NOTE: This is a 'working draft' sequence. It currently
**consists of 11 contigs. Gaps between the contigs
**are represented as runs of N. The order of the pieces
**is believed to be correct as given, however the slaes
**of the gaps between them are based on estimates that have
**provided by the submittor.

**Phis sequence will be replaced

**by the finished sequence as soon as it is available and
*the accession number will be preserved.

**1796 1895: gap of unknown length

** 30804 30903: contig of 1795 bp in length

** 30804 30903: contig of 3269 bp in length

** 34273 40069: contig of 3269 bp in length

** 40170 62844: contig of 3269 bp in length

** 62855 6294: gap of unknown length

** 83595 83544: contig of 5797 bp in length

** 84927 85026: gap of unknown length

** 84927 85026: gap of unknown length

** 84927 85026: gap of unknown length

** 102832 116522: contig of 17705 bp in length

** 102832 116522: gap of unknown length

** 102832 116523 116523 116523 116523 116523 116523 116523 11
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Submitted (07-MAR-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA On Apr 19, 2001 this sequence version replaced g1:9256458.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 13490)
DDE Joint Genome Institute.
                                                                                                            Similarity
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Center Project Name: 702139
Center clone name: CITB-H1_2194D22
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DOE Joint Genome Institute.
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                                                                    Conservative
                                                                                                                                                                                                                                                               /clone="CTD-2194D22"
/clone_lib="CalTech human BAC library D"
/35747 c 36124 g 30727 t 1000 others
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/db_xref="taxon:9606"
/chromosome="5"
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                                                      45.0%; Score 225; DB 2;
74.0%; Pred. No. 1.6e-29;
tive 0; Mismatches 101
                                                                                                                                         Length 134909;
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CE 2 (bases 1 to 17986)

CE 2 (bases 1 to 17986)

CE 2 (bases 1 to 17986)

RRS Celniker, S.E., Adams, M.D., Kronmiller, B., Tyler, D., Wan, K.H., Relation, C.A., Gocayne, J.D., Amanatides, P.G., Brandon, R.C., Roller, A., Evans, C.A., Gocayne, J.D., Beeson, K.Y., Busam, D.A., Carlson, J.W., Center, A., Champe, M., Daveport, L.B., Dietz, S.M., Dodson, K., Dorsett, V., Doup, L.E., Doyle, C., Dresnek, D., Farfan, D., Ferriera, S., Frise, E., Galle, R.F., Garg, N.S., George, R.A., Gonzalez, M., Houck, J., Hoskins, R.A., Hostin, D., Howland, T.J., Ibeywam, C., Jalali, M., Kruse, D., Li, P., Mattei, B., Moshrefi, A., McIntosh, T.C., Moy, M., Murphy, B., Nelson, C., Nelson, K.A., Nunoo, J., Paclab, J., Patagas, V., Park, S., Patel, S., Pfeiffer, B., Stapleton, M., Strong, R., Svirskas, R., Tector, C., Williams, S.M., Eaveri, J.S., Smith, H.O., Rubin, G.M. and Venter, J.C.

Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Celniker'S.E., Adams,M.D., Krommiller,B., Tyler,D., Wan,K.H.,
Holt,R.A., Evans,C.A., Gocayne,J.D., Amanatides,P.G., Brandon,R.C.,
Rogers,Y., An,H., Baldyin,D., Banzon,J., Beeson,K.Y., Busam,D.A.,
Carlson,J.W., Center,A., Champe,M., Davenport,L.B., Dietz,S.M.,
Dodson,K., Dorsett,V., Doup,L.E., Doyle,C., Dresnek,D., Farfan,D.,
Ferriera,S., Frise,E., Galle,R.E., Garg,N.S., George,R.A.,
Gonzalez,M., Houck,J., Hoskins,R.A., Hostin,D., Hovland,T.J.,
Ibeywam,C., Jalali,M., Kruse,D., Li,P., Mattei,B., Woshrefi,A.,
McIntosh,T.C., Moy,M., Murphy,B., Nelson,C., Nelson,K.A., Nunoo,J.,
Pacleb,J., Patyas,Y., Patel,S., Pfeiffer,B.,
Phouanenavong,S., Pittman,G.S., Purl,Y., Richards,S., Scheeler,F.,
Stapleton,M., Strong,R., Svirskas,R., Tector,C., Williams,S.M.,
Saveri,J.S., Smith,H.O., Rubin,G.M. and Venter,J.G.
Sequencing of Drosophila chromosome X, region 20B-20C
Uppublished (1998)
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Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
1 (bases 1 to 179386)
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AC104515.1 GI:17646880
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BACR27K09, complete sequence.
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RESULT 10
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   ACCESSION
VERSION
KEYWORDS
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DEFINITION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2372 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2612 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2552 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                         420 ATGNGNATGNNCTGNGGCTNNCNTCC 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 CTGGAGCTGGGGCTGANGCTGGGGCTGAGGCTGANGCT-GANCTGGGGCTGAGGCTCCNG 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241 CTNAGGCTGAGGTTGGGGGCTGGGGCTGAGGCTGGGGCTGAGGCTNGGNCTGAGG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 CTGAGGTTGGGGCTGGGACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTAGGG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGGACTGAGGCTGGGGCTGGGG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360 CTGAAGCTGAGGCTGGGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATGCTTGNCTNANA 419
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                                                                                        ACO11760 182421 bp DNA linear HTG 18-FEB-2000 Drosophila melanogaster chromosome X clone BACRO5X22 (D1132) RPCI-98 05.K.22 map 20C-20C strain y; cn bw sp, *** SEQUENCING IN PROGRESS ***, 116 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence was assembled using end sequences from a whole genome shotgun and from subclones of this BAC and its neighboring clones. For further information about this sequence, including its location and relationship to other sequences, please visit our sequence.
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Sequence submitted by:
Berkeley Drosophila Ge
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AC011760
AC011760.8 GI:6996986
HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and relationship to other sequences, please visit our sequence archive Web site (http://www.fruitfly.org/sequence/) or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Berkeley,
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Lawrence Berkeley National Laboratory, MS 64-121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to bdgp@fruitfly.berkeley.edu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 67. 
02; Conservative
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a 35376 c 36862 g 54093 t
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'strain-"y; cn bw sp"

/db_xref-"taxon:7227"

/chromosome-"X"
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/clone_lib="RPCI-98 (Roswe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CA 94720
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67.7%; Pred. No. 8e-29;
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JOURNAL
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(SM Drosophila melanogaster

Enkaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Pteryota; Neoptera; Endopterygota; Diptera; Brachycera;

Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

(CE 1 (bases 1 to 182421)

RS Celniker, S. E., Agbayani, A., Arcaina, T.T., Baxter, E., Blazej, R.G.,

Butenhoff, C., Champe, M., Chavez, C., Chew, M., Clasiolka, I.,

Doyle, C.M., Farfan, D.E., Galle, R., George, R.A., Harris, N.L.,

Hinkle, A., Hoskins, R.A., Houston, K.A., Hummasti, S. R., Karra, K.,

Kearney, L., Lee, B., Lewis, S., Li, P., Ling, H., Moshrefi, A.R.,

Moshrefi, M., Nixon, K., Pacleb, J.M., Park, S., Pfeiffer, B.,

Richards, S., Sethi, H., Svirskas, R.R., Wan, K.H., Webster, D.,

Woolley, P., Yang, S., Yee, M., Yu, C. and Rubin, G.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (14 OCT-1999) Drosophila Genome Center, Lawrence Berkeley Laboratory, MS 64-121, Berkeley, CA 94720, USA
On Feb 18, 2000 this sequence version replaced gi:6980168.
For further information about this sequence, including its location and relationship to other sequences, please visit our sequence archive Web site (http://www.fruitfly.org/sequence/) or send email to bogg@fruitfly.berkeley.edu. All contigs in this submission meet the following cutoffs: length >= 200 bases.

* NOTE: This is a 'working draft' sequence. It currently consists of 116 contigs. The true order of the pleces is not known and their order in this sequence record is anottrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.

* S83: contid of 583 bp in length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3: contig of 583 bp in length
3: gap of unknown length
2: contig of 449 bp in length
2: gap of unknown length
6: contig of 624 bp in length
6: gap of unknown length
6: gap of unknown length
6: gap of unknown length
3: contig of 437 bp in length
6: gap of unknown length
6: gap of unknown length
6: contig of 523 bp in length
6: gap of unknown length
   gap of unknown length contig of 551 bp in length gap of unknown length contig of 1082 bp in length gap of unknown length
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CTGGGGCTGGGGCTGAGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGGCTGGGAC	31: gap of 42: contig 42: contig 22: gap of 27: contig 27: contig 27: contig 67: contig 82: gap of 68: contig 69: contig	113300: gap of unknown length 122668: contig of 9368 bp in length 122748: gap of unknown length 143365: contig of 20617 bp in length 143445: gap of unknown length

contig gap of contig gap of

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ACCESSION VERSION

KEYWORDS ORGANISM

REFERENCE

AUTHORS

RESULT 11 AC098110 LOCUS

DEFINITION

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Db 110844 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA 110903
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CE 1 (bases 1 to 17955)

RS Muzny, D.M., Adams, C., Adio-Oduola, B., Ali-osman, F.R., Allen, C., Alsbrooks, S.L., Amaratunge, H.C., Are, J.R., Banks, T., Barbaria, J., Balsbrooks, S.L., Amaratunge, H.C., Are, J.R., Banks, T., Barbaria, J., Benton, J., Binage, K., Blankenburg, K., Bonnin, D., Bouck, J., Bouth, D., Bireva, M., Barvan, E., Burd, N.C., Carron, T.F., Carron, T.F., C., Burch, P., Burkett, C., Burcell, K.L., Byrd, N.C., Carron, T.F., Chen, R., Chae, S., Brieva, M., Carron, T.F., Chen, R., Chen, R., Chocks, J., Cheveland, C.D., Cox, C., Chen, R., Chocks, S.R., Chaeks, J., Chavez, D., Chen, R., Chen, 
                        Submitted (23 °CT'-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On Dec 20, 2001 this sequence version replaced gi:17062358.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Norway rat.
Rattus norvegicus
Eukaryota; Metazo
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Center code: BCM
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TITLE JOURNAL REFERENCE AUTHORS

JOURNAL

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findPhrapList
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NOTE: This is a 'working draft' sequence. It currently consists of 64 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
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8982: gap of unknown length
15853: contig of 6871 bp in length
15953: gap of unknown length
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Matches
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                                               Similarity
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156495:
                                               43.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6: contig of 2655 bp in length 6: gap of unknown length 1: contig of 2155 bp in length 1: gap of unknown length 7: contig of 2056 bp in length 7: contig of 2056 bp in length 7: gap of unknown length 6: contig of 1688 bp in length
                                                                         gap of
                                               Score 217.6;
Pred. No. 2.
                                     Mismatches
                                                                                                                                                            unknown
y of 1115
                                                                                                                                                                                  f unknown
g of 1276
f unknown
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of 1245
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of 2450
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of 1505
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of 1878
                                                                          of 1245 bp in unknown length
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of 1613
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of 3270
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of 1474
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of 2006
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of 1960
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of 2017
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AUTHORS
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AF189263/c
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Hanna, M.C. and Kirkness, E.F.
                                                                                                                                                                        20850,
                                                                                                                                                                                                                                                                                                                                                AF189263.1 GI:7861745
                                                                                                                                                                          USA
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21. .2753
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                                                                          /codon_start=1
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97286 CTGGGTCTGGGTCTGGGTACTGGTCTAGGACTGGGACT 9732:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission

Submitted (24-SEP-1999) Dept. of Functional Genomics, The Institute
for Genomic Research, 9712 Medical Center Drive, Rockville, MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 2773)
Sinkkonen, S.T., Hanna, M.C., Kirkness, E.F. and Korpi, E.R. GABA(A) receptor epsilon and theta subunits display unusual structural variation between species and are enriched in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neurosci. 20 (10), 3588-3595 (2000)
                                                                                        /organism="Mus musculus"
/db_xref="taxon:10090"
1. .2773
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ROD 17-MAY-2000
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JOURNAL REFERENCE AUTHORS REFERENCE AUTHORS RESULT 13 AF131866 KEYWORDS SOURCE ORGANISM BASE COUNT DEFINITION FEATURES Locus VERSION CCESSION Query Match TITLE Matches JOURNAL. 1085 CTCCGGCTGGGGCTCCGGCTTGGGCTCGGGCTCAGGCTCAGGCTCAGGCTCAGG 1026 1145 CTCAGGCTCCGGCTCAGGCTCCGGCTCAGGCTCCGGCTCAGGCTCAGGCTCAGG 1086 301 CTGGAGCTGGGGCTGAGGCTGGGGGCTGNNGCTGA-NCTGGGGCTGAGGCTCCNG 359 965 CTTGGGTTCTGGCTGGGGCTCAGGCTGGGGCTCAGGCTCAGGCTCAGGCTGCGG 181 CTGAGGTTGGGGCTGGGGCTGGGGCTANGGCTGGGGCTGAGGCTGGGGCTAGGG 240 121 CTGGGGCTGAGGCTGGGGCTGGGACTGAGGCTGGGGCTGGGGCTGGGGCTGGGG 180 726 GTCTGGGTCGGGGTTGGCGCCCAGCCTGGACCTGGGCTGGGGTCTGGGGCT 676 420 ATGNGNATGNNCTGNGGCTNNCNTCCNNGACAAANANTTNNAACTTGNGGT 470 241 CTNAGGCTGAGGTTGGGGCTGGGGCTGACGCTGGGGCTGAGGCTNGGNCTGAGG 300 61 CTGGGGCTGGGGCTGGGGGCTGGGGGCTGGGGCTGGGACTGAGGCTGGGG 120 Local 1 CTGAGGCTGGGGCTGGGGCTGAGGCTGGAGCTGAGGCTGGGGCTGGGG 60  ${\tt CTGTGGCTCAGGCTGAGGCTCAGGCTCAGGCTGAGGGCTGAGGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGGCTGAGGAGGCTGAGGGCTGAGGGCTGAGGGCTGAGGGCTGAGGGCTGAGGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGCTGAGGC$ CTGAAGCTGAGGCTGGGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATGCTTGNCTNANA 419 CTCAGGCTGGGGCTCAGGCTCCGGCTGGGGCTCAGGCTGAGGCTCAGGCTGTGG CTCAGGCTCCGGCTTGGGTTCTGGCTGGGGCTCCGGCTGGGGCTCCGGCTGAGGCTCAGG Mus musculus BAC 271B7 chromosome X Gabre gene, complete sequence. AF131866.1 GI:6651043 Direct Submission
Submitted (26-FEB-1999) Genome Analysis, Institute of Molecular Biotechnology, Beutenbergstrasse 11, Jena 07745, Germany Location/Qualifiers
1. .110312 Unpublished 2 (bases) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 110312)
Platzer,M., Zhao,W., Nordsiek,G., Herman,G.E. and Rosenthal,A. Genomic analysis of mouse X chromosomal regions corresponding to been scales. Platzer, M. Mus musculus house mouse Similarity 610 (bases 1 to 110312) Conservative D 43.0%; 0; Score 215; DB 10; Length 2773; Pred. No. 9.8e-28; 110312 bp Mismatches 157; DNA Indels linear ROD 01-JAN-2000 Gaps

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ARAROQOEVFVCEIVTYEENAAERGYOMSPRSRRPQCPWRRCGFSYYCFRYLRKYFCMA
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complement(3398. .>22146)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement()01n(3398. 5235,5488. 5687,5817. 5969,
9849. 9986,71147. 11229,11923. 1.2143,16534. 1670
21338. .21484,21855. .21898,22038. .>22146))
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19674. .19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="Gabre"
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1156
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                                                                                                                                                                    "LIMC5"
                                                                                                                                                                                                                                                                                                                                                                       .14107)
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complement(23547. .23581)
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complement(23582. .23739)
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ement(26021. .26112) \_family="MER45B"

complement(23950...25874)
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/rpt\_family="84A" 28227. .28247

/rpt\_family="RMER15"
complement(31573. 3167)
/rpt\_family="RMER15"

family="(GA)n"
1. .31710

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RESULT 14
AC015260/c
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Best Local
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                                                                                17879 GTCTGGGTCGGGGTTGGCGCCCAGCCTGGACCTGGCCCTGGGGGTCTGGGGCT 17929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17820 CTGTGGCTCAGGCTGGGGC-TCAGGCTGAGGCTGGGGCTGGGGCTCAGGCTGAG 17878
                                                                                                                                                                                                                                                    17760 CTCAGGCTGGGGCTCCGGCTGGGGCTCGGGCTCAGGCTGAGGCTCAGGCTGTGG 17819
                                                                                                                                                                                                                                                                                                                                    17700 CTCAGGCTCCGGCTTGGGTTCTGGCTGGGGCTCCGGCTGGGGCTCCGGCTGAGGCTCAGG 17759
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                                                                                                                                                                                         360 CTGAAGCTGAGGCTGGGGCNTAACGCTGAGCTNGNNGCTGGTGCTNATGCTTGNCTNANA 419
                                                                                                                                                                                                                                                                          301 CTGGAGCTGGAGCTGGAGCTGGGGCTGGAGCCTGAGCCTCAGGCTCCCNG 359
                                                                                                                                                                                                                                                                                                                                                                                                                                        181 CTGAGGTTGGGGCTGGGGCTGAGGCTGAGGCTGGGGCTAGGG 240
                                                                                                                                                                                                                                                                                                                                                          241 CTNAGGCTGAGGTTGGGGGCTGGGGCTGACGCTGGGGCTGAGGCTNGGNCTGAGG 300
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complement(36709.

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repeat\_region repeat\_region

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fami

/- "MLT1B"

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/rpt\_family="(CA)n"
complement(37142. .37347)
/rpt\_family="B4"

family="BI\_MM"
37110 family="A-rich" ement(36770

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AE003574/c
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Best Local :
                                                                                                                            ORGANISM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7017 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA 6958
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fruit fly.

Drosophila melanogaster

Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Eukaryota; Neoptera; Endopterygota; Diptera; Brachycera;

Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

1 (Dases 1 to 274388)

Adams, M.D., Celniker, S.E., Holt, R.A., Evans, C.A., Gocayne, J.D.,
                                                                                                                                                                                                                                           ABUUJ574 274388 bp DNA linear INV 12-OCT-200: Drosophila melanogaster genomic scaffold 142000013386033 section 1 of 2, complete sequence.
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* NOTE: This is a "working draft" sequence.

* This sequence will be replaced

* This sequence will be replaced

* by the finished sequence as soon as it is available and

* the accession number will be preserved.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster
Eukaryota: Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 7085)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Drosophila melanogaster"
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                                                                                                                                                                                                 GI:10803726
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Pred. No. 1e-27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (21-MAR-2000) Celera Genomics, 45 West Gude Drive, Rockville, MD, USA
On Oct 16, 2000 this sequence version replaced gi:10726352.
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TITLE

COMMENT FEATURES

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Db 177962 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA 177903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 178022 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA 177963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db 178082 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                         177902 CTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGACTGGGA 177843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181 CTGAGGTTGGGGCTGGGACTGAGGCTGGGGCTANGGCTGGGGCTGAGGCTAGGG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301 CTGGAGCTGGGGCTGANGCTGGGGCTGGGGCTGNNGCTGANCTGGGG 347
                                                                                                                                                                                                                                                                                                                                        241 CTNAGGCTGAGGTTGGGGGCTGGGGCTGACGCTGGGGCTGAGGCTNGGNCTGAGG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 CTGGGGCTGGGGCTGGGGCTTGGGGCTTGGGGCTGGGGCTGGGGACTGAGGCTGGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CTGAGGCTGGGGCTGGGGCTGAGGCTGGAGCTGAGGCTGGGGCTGGGG 60
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61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="FLYBASE:FBan0014614"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            __inale_"1985-1986"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86;
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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76.2
74.4
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73
72
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Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      October 10, 2002, 12:39:37; Search time 18.7333 Seconds (without alignments) 6556.054 Million cell updates/sec
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Match Length DB
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     GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
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28 70.8 14.2 4411529 4 US-09-103-840A-1 c 29 70.2 14.0 30001 1 US-08-125-468-1 c 31 69.2 13.8 12985 4 US-09-056-556-182 c 31 69.2 13.8 12985 4 US-09-056-556-182 c 31 69.2 13.8 12985 2 US-08-249-242c-1 33 67.6 13.5 1193 4 US-09-372-422A-23 c 34 66.1 13.4 281 2 US-08-449-075-2 c 36 66.2 13.2 1187 1 US-08-440-856A-2 c 37 66 13.2 579 2 US-08-737-5248-17 c 38 66 13.2 579 2 US-08-737-5248-17 c 39 66 13.2 579 2 US-08-737-5248-17 c 39 66 13.2 639 2 US-08-737-5248-17 c 40 66 13.2 639 2 US-08-737-5248-12 c 41 66 13.2 639 2 US-08-737-5248-9 c 42 66 13.2 639 2 US-08-737-5248-9 c 43 66 13.2 653 2 US-08-737-5248-9 c 44 66 13.2 2123 2 US-08-737-5248-9 c 44 66 13.2 2123 2 US-08-737-5248-9 c 45 65.8 13.2 2123 2 US-08-737-5248-9 c 46 66 13.2 2123 2 US-08-737-5248-9 c 47 68 13.2 2123 2 US-08-737-5248-9 c 48 66 13.2 2123 2 US-08-737-5248-9 c 49 66 13.2 2123 2 US-08-737-5248-9 c 40 66 13.2 2123 2 US-08-737-5248-9 c 41 62 13.2 2123 2 US-08-737-5248-9 c 42 63 13.2 2123 2 US-08-737-5248-9 c 43 64 13.2 2123 2 US-08-737-5248-9 c 44 65 13.2 2123 2 US-08-737-5248-9 c 45 65 13.2 2123 2 US-08-737-5248-9 c 47 68 13.2 2123 2 US-08-737-5248-9 c 48 68 13.2 2123 2 US-08-737-5248-9 c 49 68 13.2 2123 2 US-08-737-5248-9 c 40 68 13.2 2123 2 US-08-737-5248-9 c 40 68 13.2 2123 2 US-08-737-	RESULT US-09- ; Sequ ; Pate ; GENE ; APP		4-	c 4.		c 4:						30	c J		w			c 3(		22
14.2 4411529 4 US-09-103-840A 14.0 30001 1 US-08-125-468-1 14.0 30001 2 US-08-474-933-1 13.8 985 4 US-09-056-556-1 13.8 12588 2 US-08-387-942C-1 13.4 1352 1187 1 US-08-419-075-4 13.4 352 579 2 US-08-419-075-24B-13.2 579 2 US-08-419-075-24B-13.2 639 2 US-08-419-075-1 13.2 647 2 US-08-419-075-1 13.2 2123 2 US-08-419-075-1 13.2 2123 2 US-08-397-942C-1 13.2 2123 2 US-08-397-942C-1 13.2 459 2 US-08-387-942C-1	ULT 1 09-197-649- equence 7, atent NO. 6 ENERAL INFO APPLICANT: APPLICANT:		65.8	66								66	66.		61					~1
09-103-840A 8-127-948-1 8-127-948-1 9-056-556-1 9-056-556-1 9-372-422A- 8-419-075-4 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-1 8-419-075-1 8-419-075-1 8-419-075-1 8-419-075-1 8-419-075-1	7 Applicat 194550 RMATION: Gold, La		13.2	13.2	•		•							٠		13.	13.		14	
09-103-840A 8-127-948-1 8-127-948-1 9-056-556-1 9-056-556-1 9-372-422A- 8-419-075-4 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-1 8-419-075-1 8-419-075-1 8-419-075-1 8-419-075-1 8-419-075-1	ion US/		459	2123	2123	653	647	639	639	579	579	1187	352	281	1193	12588	985	30001	30001	4411529
09-103-840A 8-125-68-1 8-125-68-1 8-125-68-1 8-387-942C- 9-372-62A- 8-419-075-2 8-440-856A- 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-2 8-419-075-1 8-387-942C- LIGNMENTS	0919		N	N	N	N	2	N	N	N	N	ىم	N	N	4	N	4	N	بر	4
	17649	ALIGNMENTS	US-08-387-942C-31	US-08-419-075-1	US-08-737-524B-9	US-08-419-075-18	US-08-419-075-20	US-08-419-075-2	US-08-737-524B-12	US-08-419-075-3	US-08-737-524B-17	US-08-440-856A-2	US-08-419-075-25	US-08-419-075-4	US-09-372-422A-23	US-08-387-942C-1	US-09-056-556-182	US-08-474-933-1	US-08-125-468-1	US-09-103-840A-1

	2 CGACGACGACGACGACGACGACGACGACGACGACGACGAC	Db 18	
	293 CGCCCAGGGCATCGCCAACGGGGAACGCCAACGGCCATGGGCAACGAGGTCACCATCCA 352	Оу 29	
	2 CGACGACGACGACGACGACGACGACGACGACGACGACGAC	рь 122	
	GACGCCGTCCACGGCTTCGCCAACGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGC 292	Оу 233	
	2 CGACGACGACGACGACGACGACGACGACGACGACGACGAC	Db 6	
	173 CAATGGGGTCGCCGCACAGGCCATCGCCAATGAGGACGCCACCCAGGCCATCGCCAACTG 232	Оу 17	
	GGCCATGGACGACGACGACGACGACGACGACGACGACGACGACGAC	DЬ	
	113 GGGCATCGCCAAGGACGCCATCGCCAACGAGGAGCTTGCCCAGGGGCATCGC 172	Qy 11	
0;	Similarity 3; Conserva	Best L Matche	
	æ	Query Match	
	OTHER INFORMATION: Fragments having NCOL restriction sites.	; OTHER INFOR US-09-197-649-7	
	INFORMATION: having a 120 repeat of ACG flanked by fixed	; OTHER	
	FORMATION:	OTHE	
	ORGANISM: Artilicial Sequence	; ORGANISM	
	TYPE: DNA	TYPE	
	LENGTH: 390	: LENG	
	SOFTWARE: Patentin Ver. 2.0	; SOFTW.	
	NUMBER OF SEQ ID NOS: 26	; NUMBE	
	ER FILING DATE: 1990-08-02	; EARLIER	
		; EARLIER	
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		EARLIER	
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	WT APPLICATION NUMBER: US/U9/19/,649	; CURRENT	
	띪	; FILE	
ion	OF INVENTION: Systematic Polypeptide Evolution by Reverse Translation	; TITLE OF	
		APPLI	
	ANT: Pribnow. David	APPLICANT	

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Qγ
                                                                                                               Db 3937867 GCCAAGGCTGCCGATGCCCGCGCCGCCGGTGCCGGTGCCGCCGTTGCCCGCCGGTGCC 3937808
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US-09-103-840A-2/c
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                                      Db 3937807 CCCGTTGCCGCCGGGGTCGTCAGTGAGTGGGCCGTTGGCCGGATGGCCCCGTTGCCGCC 3937748
                                                                                                                                                                                                                                                                                                                                           Db 3938107 GCCGCTGCCGGTGCCGCCGTCGCCGGCCGGATCCGCCGACCCCGAGGCC 3938048
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: DAM SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM TITLE OF INVENTION: TUBERCULOSIS EILE REFERROE: 24366-2007.00 CURRENT APPLICATION NUMBER: US/09/103,840A CURRENT FILING DATE: 1998-06-24 NUMBER OF SEQ ID NOS: 2 SOFTWARE: Patentin Ver: 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: FLEISCHMAN, ROBERT D.
APPLICANT: WHITE, Owen R.
APPLICANT: FRASER, Claire M.
APPLICANT: VENTER, John C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 4403765
TYPE: DNA
ORGANISM: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: CDC 1551
OTHER INFORMATION: "n" bases at various positions throughout the sequence OTHER INFORMATION: represent a, t, c or g
                                                                                                                                                                                                                                                                                      213 ACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACGGGGAACGGGGACGCCGTCCTC 272
  453 GCACAGGGCATCGCCAACGAGGACGCCCCCCAGGGCATCGCCAAC 497
                                                                        393 GAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGAATCGCCGAGGATGTC 452
                                                                                                                                                   333 GGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCCAGGGCATCGCTAAC 392
                                                                                                                                                                                                                            273 AGCTTCGCCAACGGGGACGCCGCCCAGGGCATCGCCAACGGGGACGCCACCAAGGGCATG 332
                                                                                                                                                                                                                                                                                                                                                                                153 GAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCCATCGCCAATGAGGACGCC 212
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Local Similarity 49.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 6.5e-08;
0; Mismatches 236;
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                                                                                                                                  28
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; Sequence 4, Application US/09023173 ; Patent No. 6066781 ; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Systematic Polypeptide Evolution by Reverse Translation CURRENT PAPLICATION NUMBER: US/09/197,649
CURRENT ETLING DATE: 1998-11-23
EARLIER APPLICATION NUMBER: 07/829,461
EARLIER APPLICATION NUMBER: 07/829,461
EARLIER APPLICATION NUMBER: 07/739,055
EARLIER APPLICATION NUMBER: 07/39,055
EARLIER FILING DATE: 1991-08-01
EARLIER FILING DATE: 1991-08-01
EARLIER FILING DATE: 1991-08-02
NUMBER OF SEQ ID NOS: 26
SOFTWARER OF SEQ ID NOS: 26
SOFTWARER DATAST NETATION SERVICES SOFTWARER DATAST NETATION NUMBER: 07/561,968
EARLIER PILING DATE: 1990-08-02
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Patent No. 6194550
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APPLICANT: Smith, Jonathan D.
TITLE OF INVENTION: Systemati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Gold, Larry APPLICANT: Tuerk, Craig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: Sequ
OTHER INFORMATION: having a 120 repeat of ACG flanked by fi
OTHER INFORMATION: fragments having NCOI restriction sites.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 TCGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 CCGAGGACGCCATCCAGGGCATCGCCAACGAGGGATGCCCCAGGGCCATCGCCAATGGGG 180
                                                                                                                                                                                                                                               481 CCCAGGGCATCGCC 494
                                                                                                                                                                                                                                                                                                                                                         421 AGGACGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCG 480
                                                                                                                                                                                                                                                                                                                                                                                                                 361 CTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCGTCGTCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16.6%;
Similarity 51.3%;
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Pred. No. 3.7e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches 182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 390;
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CLONE:
US-09-023-173-4
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ATTORNEY/AGENT INFORMATION:
NAME: PELILIBRY, JOANNE R
REGISTRATION NUMBER: P42995
REFERENCE/DOCKET NUMBER: 0665
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-324-0880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 650-324-0960
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 1140 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Sutliff, Thomas D.

APPLICANT: Rodriguez, Raymond L.

TITLE OF INVENTION: Production of Mature Proteins
TITLE OF INVENTION: in Plants
NUMBER OF SEQUENCES: 23
CORDERCONTONTON
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: U5/09/023,173
FILING DATE: 13-FEB-1998
CLASSIFICATION: 435
PRIOR APPLICATION UDATA:
APPLICATION UDATA:
APPLICATION UDATA:
13-FEB-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Dehlinger & Associates
                                               368 GGACGCCGTCCA---GGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGA 424
                                                                                                                                                                                                                510 CGCCGGCACCGTCGCCCTCACCAACAGCATCGGCGTCCTCGGCGTCGCCCCGAGCGC 569
                                                                                                                                                                                                                                                             248 CTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCCAGGGCATCGC 307
                                                                                                                                                                                                                                                                                                            450 TAGCATGGTCCCGAGCGAGACCAACCCGTTCCAGGACACCAACAGCCATGGCACCCACGT 509
                                                                                                                                                                                                                                                                                                                                                        188 ACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGG 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                    128 CGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCCATCGCCAATGGGGTCGCCGC 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    330 CAGCCAGATCAAGGCCCCGGCCCTCCACAGCCAGGGCTACACCGGCAGCAACGTCAAGGT 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               270 CGCCTACGTCGAGGAGGACCACGTCGCCCACGCATATGCACAGAGCGTCCCGTACGGCGT 329
                      630 CAACGGCATCGAGTGGGCCATCGCCAACAACATGGACGTCATCACCATGAGCCTCGGCGG 689
                                                                                                               570 CAGCCTCTACGCCGTCAAGGTACTCGGCGCCGACGGCAGCGGCCAGTACAGCTGGATCAT 629
                                                                                                                                                              308 CAACGGGGACGCCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGA 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68 TAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGA 127
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Palo Alto
STATE: CA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 CGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGC 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 48.8 es 239; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        CGCCGTCATCGACAGCGGCATCGACAGCAGCCACCCGGACCTCAAGGTCGCCGGCGGAGC 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  94306
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches 248; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 77.2; DB 3;
Pred. No. 3.6e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0665-0007.30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
US-09-056-556-176
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (206) 682-60
INFORMATION FOR SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Reed, Steven G.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Dillon, Davin C.
TITLE OF INVENTION: COMPOUNDS
NUMBER OF SEQUENCES: 241
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Maki, David J.
REGISTATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 21.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    750 CGTCGTCGCC 759
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               425 CGCCGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCGCCCA 484
256 CTTTGCCGGTGCCGGCGGCCAGGGCGGCCTCGGTGGGCAGGGCGGCAATGGCGGCGGCTC 315
                                            278 CGCCAACGGGGACGCCGCCCAGGGCATCGCCAACGGGGACGCCACCAAGGGCATGGGCAA 337
                                                                                           218 GGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTT 277
                                                                                                                                                                                          136 CGGCAAGGGCGGCTTCGGCGGCGACGGCGGTCAGGGCGCCCCAACGGCGGCGGTACCGT 195
                                                                                                                                                                                                                                    158 TGCCCAGGGCATCGCCAATGGGGTCGCCCGCACAGGGCATCGCCAATGAGGACGCCACCCA 217
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/0 FILING DATE: 07-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                  98 CGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGT 157
                                                                                                                                                                                                                                                                                                                                                                               16 CGGCAAGGGCGGCGACGGTGGCCACGGCGTGACGGCGTCGGCGACAGTTCCGTCAC 75
                                                                                                                                                                                                                                                                                                                                                                                                                           38 CGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCACCCAGTGCATCGCCAA 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
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                                                                                                                                                                                                                                                                                      76 CCAAGGCGGCAGCGGCGGCGGCGCGCCGGCGGCGGCGGCAGCGGCTTTTTCGG 135
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TYPE: nucleic acid
cmpannerce: cingle
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tch 15.4%; Score 77; DB 4; Length 494
al Similarity 49.6%; Pred. No. 3.8e-06;
197; Conservative 0; Mismatches 200; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98104-7092
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/09056556
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) 682-6031
-- NO: 176:
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GENERAL INFORMATION:
APPLICANT: Horlick, Robert A.
APPLICANT: Horlick, Robert A.
APPLICANT: Robbins, Alan K.
TITLE OF INVENTION: Eukaryotic Cells Stably Expressing Genes
TITLE OF INVENTION: Eukaryotic Cells Stably Expressing Genes
TITLE OF INVENTION: Evanyotic Cells Stably Expressing
TITLE OF INVENTION: Evanyotic Cells Stably Expressing
TITLE OF INVENTION: 18-08 Multiple Transfected Episomes
FILE REFERENCE: 0867/19903US1
CURRENT APPLICATION NUMBER: US/09/130,114
CURRENT FILING DATE: 1998-08-06
NUMBER OF SEQ ID NOS: 36
SOUTHWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 2
LENGTH: 1931
TYPE: DNA
   US-09-056-556-167

Sequence 167, Application US/09056556

Patent No. 6350456

; GENERAL INFORMATION.
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Patent No. 5976807
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                                                                                                                                                                                                                 438 ATCGCCGAGGATGTCGCCACAGGGCATCGCCAACGAGGACGCCGCCCAGGGCA 489
                                                                                                                                                                                   378 CAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGA 437
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18 GAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGAC 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATCCAG 137
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SOPTWARE: PATENTON TO DATA:

APPLICATION NUMBER: US/09/056

PILING DATE: 07-APR-1998

CLASSIFICATION:

ANTORNEY/AGENT INFORMATION:

NAME: Maki, David J.

REGISTRATION UNUMBER: 31,392

REGISTRATION INFORMATION:

TELLEDAMUNICATION INFORMATION:

TELLEPAX: (206) 622-4900

TELLEPAX: (206) 622-6931

INFORMATION FOR SEQ ID NO: 167:

SEQUENCE CHARACTERISTICS:

SEQUENCE CHARACTERISTICS:

TYPE: DUCIDE: GACIA
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FC-DOS/MS-DOS
PC-DOS/MS-DOS
PC-DOS/MS-DOS
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APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Dillon, Davin C.
TITLE OF INVENTION: COMPOUNDS
                                                   1357 GTGCCGCCAGCGGCTCAGGCGTCATCAACGTCACCGCCGGCCACGGCGACCGGCGACACGGCGGCA 1416
                                                                                                                                                          1297 GCGGCCACGGCGGCGCTGCCACCGGCGGCGGCAGCGGCAAGGGCGGCAACGGCACCAGCG 1356
                                                                                                                                                                                                                                                               1237 GCGGCAACGGCTCCGCGGGCGCCGGCGGCGGCGGCGGCGGCGGCGCGCAACG 1296
                                                                                                                                                                                                                                                                                                                                                                   1177 GCTCAGGCGTCGACGTCACCGCCGGCCACGGCGGCAACGGCGGCAATGGCGGCAACG 1236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              199
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499 A 499
                                                                                                    439 TCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCCAGGGCATCGCCAACA 498
                                                                                                                                                                                                           379 AGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGAA 438
                                                                                                                                                                                                                                                                                                               319 CCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCC 378
                                                                                                                                                                                                                                                                                                                                                                                                                      259 GGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCAGGGCATCGCCAACGGGACG 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               139 GCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCG 198
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82 CCCAGTGCATCGCCAACGAGGAAGCC---GCCCAGGGCATCGCCGAGGACGCCATCCAGG 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22 ACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCA 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACG 258
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Similarity 48.9%;
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WESULT 9
US-09-056-556-167/c
; Sequence 167, Application US/09056556
; Patent No. 6350456
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Streptomyces venezuelae US-09-105-537-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-105-537-7
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APPLICANT: Sherman, D.H.
APPLICANT: Liu, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 7, Application US/09105537A Patent No. 6265202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 43
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
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APPLICANT: Zhao, L.
TITLE OF INVENTION: DNA encoding methymycin and pikromycin
FILE REFERENCE: 600.4380S1
CURRENT APPLICATION NUMBER: US/09/105,537A
CURRENT FILING DATE: 1998-06-26
                                                                                                                                         GENERAL INFORMATION:
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TYPE: DNA
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APPLICANT: Reed, Steven G.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Dillon, Davin C.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR THE PREVENTION AND NUMBER OF SEQUENCES; 241
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                  804 CAACCACGCCGCCTACCGCGAGCACCTCGCGGACCTCCCCGGCGTCCTCGTCGCCGACCA 863
                                                                                                                                                                                                                                                                                                                                                                                                                                      .416 CAACGAGGACGCCGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGA 475
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    296 CCAGGGCATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGG 355
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              564 CGGCGACGCCGAGGTCTTCAGCTTCCACGCCACGAGGCCGTCAACGCCTTCGAGGGCGG 623
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220; Conservative
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                                                    TREAT
     RESULT 10
US-09-105-537-3/c
; Sequence 3, Application US/09105537A
; Patent No. 6265202
; GENERAL INFORMATION:
; APPLICANT: Sherman, D.H.
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Best Local :
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
SEQUENCE 1439 base pair:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 31,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/056,556
FILING DATE: 07-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 98104-7092
COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                               1113 CGCCGTGGCCGCTTGCCGCCGTTGCCGCCGTCGCCCACAGCGTTGCCGAAGGACA 1054
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STREET: 6300 C
CITY: Seattle
STATE: Washing
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                                                                                                                                                                                        993 TGCCCCCATTACCGCCGCGCACCACCGGAGCCGGCGTTGCC 954
                                                                                                                                                                                                                                428 CGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCC 467
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STRANDEDNESS: sing
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68 TAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGA 127
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 CGCCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGC 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         219; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches 241;
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; LENGTH: 5036
; TYPE: DNA
; ORGANISM: Mycobacterium tuberculosis
US-09-177-349-2
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US-09-177-349-2/c
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; TYPE: DNA
; ORGANISM: Streptomyces venezuelae
US-09-105-537-3
                                                                                    CURRENT APPLICATION NUMBER: US/09/177,349
CURRENT FILING DATE: 1998-10-23
NUMBER OF SEQ ID NOS: 14
SOFTMARE: Patentin Ver. 2.0
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                           sequence 2, Application US/09177349
Patent No. 6268201
                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
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Best Local
                                                                                                                                                                                                       APPLICANT: Bloom, Barry R.
APPLICANT: Bloom, Barry R.
APPLICANT: Jacobs Jr., William R.
TITLE OF INVENTION: Inib, iniA AND iniC GENES OF MYCOBACTERIA AND METHODS
TITLE OF INVENTION: OF USE
FILE REFERENCE: 96700/491
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APPLICANT: Xue, Y.
APPLICANT: Zhao, I.
TITLE OF INVENTION: DNA encoding methymycin and pikromycin
FILE REFERENCE: 600.438US1
CURRENT APPLICATION NUMBER: US/09/105,537A
CURRENT FILING DATE: 1998-06-26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12200 CTTCGACCTGCCCGGCGGCAGCCCCGCCGGCGGGACCAACGCCAAGATGAGCGAGGCCGC 12141
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12320 CGGCGACGCCGAGGTCTTCAGCTTCCACGCCACCAAGGCCGTCAACGCCCTTCGAGGGCCG 12261
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    239 CGTCCACGGCTTCGCCAACGGGGA----CGCCGTCCTCAGCTTCGCCAACGGGGACGCCGC 295
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59 GGGCATCGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCAT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 14.9%;
Similarity 49.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Score 74.4; DB 4; Length 13613;
; Pred. No. 1.1e-05;
0; Mismatches 221; Indels 3; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дδ
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; ORGANISM: Streptomyces venezuelae US-09-320-878-21
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                                                                                                                                                                                                                                                                                                                                                                                                                                   COURENT APPLICATION NUMBER: US/09/320,878A
COURRENT FILING DATE: 1999-05-27
EARLIER APPLICATION NUMBER: CIP OF 09/141,908
EARLIER FILING DATE: 1998-08-28
EARLIER FILING DATE: 1998-06-06
EARLIER APPLICATION NUMBER: CIP OF 09/073,538
EARLIER APPLICATION NUMBER: CIP OF 08/846,247
EARLIER APPLICATION NUMBER: CIP OF 08/846,247
EARLIER FILING DATE: 1997-04-30
EARLIER FILING DATE: 1999-02-08
EARLIER APPLICATION NUMBER: 60/119,139
EARLIER APPLICATION NUMBER: 60/100,880
EARLIER APPLICATION NUMBER: 60/100,880
                                                                                                                                                                                                                                       SOFTWARE: PatentIn Ver.
SEQ ID NO 21
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 21, Application US/09320878A Patent No. 6117659
                                                                                                                                                                                                                                                           EARLLER MITLING DATE: 1998-09-22
EARLIER FILING DATE: 1998-05-28
EARLIER FILING DATE: 1998-05-28
NUMBER OF SEQ ID NOS: 34
NUMBER OF SEQ ID NOS: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SENERAL INFORMATION:
APPLICANT: ASHLEY, Gary
APPLICANT: BETLACH, Melanie C.
APPLICANT: BETLACH, Mary C.
APPLICANT: MCDANIEL, ROBERT
APPLICANT: TANG, Li
                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: RECOMBINANT NARBONOLIDE POLYKETIDE SYNTHASE FILE REFERENCE: 300622002120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     515 AGAGCCAGGCCACC 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     427 CCGCCCAGGGAATC 440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     367 AGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCCAGGGCCATCGCCAACGAGGACG 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         635 CCAATACCTAACCCAGCACCAACCTGAGCGCCGACCTCGGCCTCAATCACGGCAGTAAAA 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     307 CCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACG 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             695 CCCAGACCCAGGCCAACCCCGCCGCCAAAGCCCCATACCGGCCTGAGCACCCAGACCCGTC 636
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            875 CCGGCTGAGACACCGATCTGGCTAGCGATGCCCGCCTGGCCGCCGACACCAGCGCCGACA 816
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 ACGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGGCATCG
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Similarity 48.2%; Pred. No. 1.3e-05;
D9; Conservative 0; Mismatches 225; Indels
   14.8%;
49.3%;
   Score 74;
Pred. No.
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Patent No. 5939289
GENERAL INFORMATION
                                                                                            FILING DATE: 09-MAY-1995
CLASSIFICATION: 435
ATTORNEY_AGENT INFORMATION:
NAME: MURPHY JR, GERALD M.
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 1809
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-205-8000
                        TELEFAX: 703-205-8050
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: ERTESVAG, HELGA
APPLICANT: VALLA, SVEIN
APPLICANT: SKJAK-BRAEK, GUDMUND
APPLICANT: LARSEN, BJORN
TITLE OF INVENTION: DNA COMPOUNDS COMPRISING SEQUENCES
TITLE OF INVENTION: ENCODING MANNURONAN C-5-EPIMERASE
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
ADDRESSEE: BIRCH, STEWART, KOLASCH & BIRCH, LLP
                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    252 CGCCGCCATGGGCCTCACCTCCCTCGACGCGTTTCCCGAGGTCATCGACCGGAACCGGCG 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           296 CCAGGGCATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGG 355
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                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: P.O.BOX 747
CITY: FALLS CHURCH
STATE: VA
                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           219; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: BIRCH, STEWART, KOLASCH & BIRCH, LLP P.O.BOX 747
12588 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
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                                                                                                                                               809-106P
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US-09-105-537-1
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                                              GENERAL INFORMATION:
APPLICANT: Sherman, D.H.
APPLICANT: Liu, H.
APPLICANT: Xue, Y.
APPLICANT: Zhao, L.
                                                                                                                                                                     ; Sequence 1, Application US/09105537A
; Patent No. 6265202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
  APPLICANT: Zhao, L. TITLE OF INVENTION: DNA encoding methymycin and pikromycin FILE REFERENCE: 600.438uSl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11237 TCGACGGCGCGCGGGCGCGATACCCTGACCGGCGGCGCGGGCGCCGATACCTTCCGCT 11296
                                                                                                                                                                                                                                                                                                                  11717 TGACCGGCGGC 11727
                                                                                                                                                                                                                                                                                                                                                                                                               11657 ACACCCTCAACGGCGGGCCGGCAACGACATCCTGGTCGGCGGCGCGGCGGCGGCGACACCC 11716
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11297 TCTCTGCCCGCGAGGACAGTCACCGCACCGACAGCCCAGCTTCACCGACCTGATCACCG 11356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11597 GCAACGACAACCTGTCCGGCACCGATGCCGGGGAAACCCTCCTGGGCTACGGCGGCAACG 11656
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11477 AGAGCTACGAGGTGGACGCCCAGGGCCGGCGTTTCGAAATCGCCCTGGACGGCAACTTCG 11536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE
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STRANDEDNESS:
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9973..12588
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6702..9695
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2227..6438
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290..1951
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RESULT 15
US-09-025-691-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Streptomyces venezuelae US-09-105-537-1
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application US/09025691 Patent No. 6069299
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/105,537A CURRENT FILING DATE: 1998-06-26 NUMBER OF SEQ ID NOS: 43 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 1
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                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM CC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/09/025,691
FILING DATE:
                                                                                                                                                                                                                                                                                                                       APPLICANT: Broadway, Roxanne M.
APPLICANT: Harman, Gary E.
TITLE OF INVENTION: FUNGUS AND INSECT CONTROL WITH
TITLE OF INVENTION: CHITINOLYTIC ENZYMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
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                                                                                                                                                                                                                                            STREET: Clinton
CITY: Rochester
CLASSIFICATION:
                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                        ADDRESSEE:
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); Mismatches 248;
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Search completed: October 10, 2002, 20:05:06 Job time: 1144.73 secs

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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (716) 263-1304
TELEFAX: (716) 263-1600
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: CDNA
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668 CTTCGCCGACA 678
                                                                                      608 CATCTCGGTCGGCGAGAAGGGCGCGCCGTCGACGACACCACCGCCCCCAGCG 667
                                       488 CATCGCCAACA 498
                                                                                                                              428 CGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCCCAGGG 487
                                                                                                                                                                      557 G-----CAGTTCCGCGCCGACCTCGCCGCCAAGCAGGCCGACGCCAAGTCGGTGAT 607
                                                                                                                                                                                                                                                                                                     308 CAACGGGGGACGCCAACGAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGA 367
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TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Goldman, Michael L. REGISTRATION NUMBER: 30,727 REFERENCE/DOCKET NUMBER: 19
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                                                                                                                                                                                                                                                                                                                                                                                         CTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGGCATCGC 307
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
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                                                                                                                                                                                                                                                         Score
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                AV438522
BG739444
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                                                                                B1829297 603079427
B1561135 603253662
B6724320 602697968
A1904151 CN-BT043-
B6847089 1024015H0
AL305165 Tetracdon
BE427000 PSR6561 1
B6417941 HVSMER001
BE216934 EST0477 T
AL193990 Tetraodon
AL254315 Tetraodon
AV438522 AV438522
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BG773077 602721380
                                                                                                                                                                                                              AL110383 DKFZp434E
AL041090 DKFZp434C
                                                                    BE216934 EST0477
AU176645 AU176645
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18
65.6	65.6	66	66.2	66.2	66.4	66.6	66.6	66.6	66.6	66.8	66.8	67	67.2	67.2	67.4	67.4	67.6	67.6	67.8	68	68	68.6	69.2	69.2	69.2	69.6	69.8
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537	401	459	770	596	633	676	585	529	456	658	461	704	925	625	938	321	652	564	619	689	530	554	814	679	538	673	454
10	9	10	10	10	9	9	10	10	9	9	10	9	12	10	છ	10	10	10	10	9	10	10	10	9	10	10	9
BG904964	AV438522	BE605180	BF265823	BE360540	AV941861	AV916390	BE470936	BF474993	AU222996	AU088571	BE517259	AU088578	CNS0091P	BG906607	BE213813	BG874723	BG314481	BF619259	BG300721	AU076299	BF483260	BG367845	BF260740	AL506812	вм178969	BG907710	BE125156
BG904964 TaLr1136C	AV438522 AV438522		BF265823 HV_CEa001	BE360540 DG1_64_E1	AV941861 AV941861		WHE0282_			AU088571	BE517259 WHE0616_F	AU088578 AU088578	AL053013 Drosophil		BE213813 HV_CEb000	BG874723 RC1-BT025		BF619259 HVSMEc001	BG300721 HVSMEb001	AU076299	BF483260 WHE1787_G	BG367845 HVSME1001	BF260740 HVSME£002	>	вм178969 saj61f08.	BG907710 Talr1162C	BE125156 DG1_13_D0

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## ALIGNMENTS

REFERENCE AUTHORS TITLE JOURNAL ACCESSION VERSION RESULT 1 AL110383 LOCUS BASE COUNT COMMENT SOURCE FEATURES DEFINITION KEYWORDS source Am Klopferspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2); Email s.wiemann@dkfz- heidelberg.de;
sequenced by LMU (Ludwig Maximilians University,
Munich/Germany) within the cDNA sequencing consortium of the German DKFZp434E0731\_r1 434 (synonym: h DKFZp434E0731 5', mRNA sequence. Blum.H., Bauersachs,S., Mewes,H.W., Gassenhuber,J. and Wiemann,S. EST (Blum, et al.)
Unpublished (1999) No s1 sequence available.
This clone (DKFZp434E0731) is available at the RZPD in Berlin.
Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GENRANY; Email: clone@rzpd.de.
Location/Qualifiers Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalla; Eutharia; Primates; Catarrhin; Hominidae; Homo.

1 (bases 1 to 697) Homo sapiens Genome Project Contact: Blum H AL110383 AL110383.1 GI:5865991 217 a /organism="Homo sapiens"
/db\_xref="taxon:9606"
/dlone="hkr2p434E0731"
/clone=lib="434 (synonym: htes3)"
/tissue\_type="testis"
/dev\_stage="adult"
/lab\_host="bH108"
/note="vector: pSport1; Site\_1: Not1; Site\_2: Sall"
a 181 c 180 g 119 t 697 bp mRNA liuea \_\_\_ nonym: htes3) Homo sapiens cDNA clone EST 29-FEB-2000

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RESULT 2
ALO41090
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This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2); Email s.wiemann@dkfz heidelberg.de;
sequenced by BMFZ (Biomedical Research Center at the Charite,
Berlin/Germany) within the cDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALU41U90 179 bp mRNA linear EST 29-FEB-2000 DKFZp434C1116_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434C1116 5', mRNA sequence.
                                                                                                                                                                                                                                                                                   No s1 sequence available.
This clone (DKFZp434C1116) is available at the RZPD in Berlin.
Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                   Genome Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Koehrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Koehrer, K., Beyer, A., Mewes, H.W., Gassenhuber, J. and Wiemann, S. EST (Koehrer, et al.)
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Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 179)
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63 c 60 g 16 t 2 others
                                                                                                                                                                                                                                                        Location/Qualifiers
                                                              /lab_host="DH10B"
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                                                                                122 CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCCAGGGCATCGCCAATGGGGT 181
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                                          8 CGAGGACGCTGTATACGACATCGCTAATGAGGACGTTGTATATGACATCGCTAATGAGGA 67
                                                                                                                                             Local
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                                                                                                                          190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 758)
NIH-MGC http://mgc.nci.nih.gov/.
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BI829297
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http://image.llnl.gov
plate: LLAM11425 row: f column:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
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                                                                                                                          Conservative
                                                                                                                                                                                                                      /note="Organ: Drain; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: ECORV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.3 kb; insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen), Research Genetics tracking code 013. Note: this is a NHL MGC Library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nttp://mgc.nci.nih.gov/.
Institutes of Health, Mammalian Gene Collection (MGC)
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/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24.9%;
                                                                                                                                             23.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg, Ph.D.
                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                           Score 118.6; DB 10; Length 758; Pred. No. 1.9e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 124.6; DB 9;
Pred. No. 3.4e-08;
0; Mismatches 31;
                                                                                                                          Mismatches 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     758 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
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                                                                                                                        Gaps
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                                                                                                                          0;
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RESULT 4
BIS61135
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AUTHORS
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                                                                                                                         ORIGIN
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                                                                                                                                                 BASE COUNT
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                                                                             Query Match
Best Local :
                                                        Matches 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                302
199 CCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   308 AGAAGATGC 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            188 CATCGCTAATGAGGACGCTGTATATGGCATCGCTAATGAGGATGCTGTATACGAATTCGC 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 128 ATATGACATCACTAATGAGGACGCTCTATACGACATCACTAATGAGGACGCTGTATACAA 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242 CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCCCAGGG 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68 TGCTTTACAAGACATAGCGAATGAGGTTGCTGTATATGACATCGCTAATGAGGACATTGT 127
                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACGCCGC 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAATAAGGATGCTGTATATGACATTGCTAATGAGGACACTGTACAAGACATCTGTAAAAA 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        THACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NATI-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Unpublished (1999)
Unpublished (1999)
Unpublished (1990)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
CDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BI561135 673 bp mRNA linear EST 05-SEP-2001 603253662F1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:5296262 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota, Metazoa, Chordata, Craniata; Vertebrata; Buteleostomi,
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 673)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BI561135.1 GI:15448449
                                                                                                                                                                                                                                                                                                                                                                                                                                                             found through the I.M.A.G.E. Consortium/LINL at:
http://image.llnl.gov
Plate: LLAM11749 row: k column: 15
                                                                         Similarity
                                                                                                                                              172
                                                        Conservative
                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="InAGE:5956262"
/clone=lib="NIH_MGC_97"
/lab_host="DH10B"
                                                                                                                                        ocation/Qualifiers
                                                                     22.6%;
                                                      Score 113; DB 10; Length 673
Pred. No. 1.1e-06;
0; Mismatches 65; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           673 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                630.
                                                                                        Length 673;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
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BG724320
                               Qy
                                                                       Дb
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                                                                                                                                                                                                                                BASE COUNT
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                                                                                                                                                                              Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://image.llnl.gov
Plate: LLAM10750 row
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
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                                                                                                                                                             Similarity
                                                                                                                                                                                                                                  183 a
                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:4829993"
/clone_lib="NIH_MGC_97"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                           19.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       row: g column: 18 ence stop: 580.
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563 CCGTCCACGGCATCGCTGACTGGGACGCC-TCCATGTCCTCGCTGACGACGACGCCGCCA 621
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 582 bp mRNA linear EST 08-MAY-2001 602697968F1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:4829993 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 582) NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                          /note-*Organ: testis; Vector: pBluescriptR (modified pBluescript KS+); Site_1: BamHi; Site_2: Sali-Xhoi (gtcgag); Oligo-dr primed using primer 5'-TYTTTTTTTTTTTTTTTTTVN-3', size-selected for average insert size 2 kb and normalized to ROT 5. This is a primary library enriched for full-length clones and constructed using the Cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/NHGRI, National Institutes of Health). Note: this is a NIH_MGC Library.*

a 147 c 151 g 101 t
                                                                                                                                                                                                                          Score 98.6; DB 10;
Pred. No. 9e-05;
0; Mismatches 94;
                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                             Length 582;
                                                                                                                                                                                                                          8; Gaps
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RESULT 6 AI904151

SOURCE

KEYWORDS

VERSION

REFERENCE

δÃ Вþ Qy Дb Qy DЬ

195

135

B

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BASE COUNT
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ACCESSION
                                                                  Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           209 CGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACGGGGACGCCGT 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 149 CGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCACAGGGCATCGCCAATGAGGA 208
                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCAGCTTCGCCAACGGGGACGCCCAGGGCCATCGCCAACGGGGACGCCACCAAGGG 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGAGGACACCCTACAAGCCGTCGCTAACAAGTACACTGTACACAACATCGCTAATGAGGG 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---AAGGCACGCTAACGTGGACGCTGTACACGACATTGCTAATGAGGACAGCGTATAAGA 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACTGTACAAGACATCACCAATGAGGGCGCTTTATACGACATTGCTAATGGCACCGAC-- 252
               147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 241)
Dias Neto.E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
Bagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
Goldman,G.H., Carvelho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
Brunstein,A., deoliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (http://www.ludwig.org.br/seq/gethtml.pl?t1=CMst2=CM-BT043-075.html
at3=0902998.td=1)
Seq primer: puc 18 forward.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: +55-11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 Andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A1904151 241 bp mRNA linear EST 30-
CM-FT043-090299-075 BT043 Homo sapiens cDNA, mRNA sequence
A1904151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A1904151.1 GI:6494538
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                                      Similarity
                                                                                                                                                  76 a
            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                         /note="Organ: breast; Vector: puc18; Site_1: Smal, Site_2: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196, 716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                              /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="BT043"
                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                      18.8%;
            0;
                                      Pred. No. 0.00038;
            Mismatches
                                                            Length 241;
            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 30-MAR-2000
            0;
      Gaps
            0,
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BG847089
                               γQ
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VERSION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         372 GCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCCATCGCCAACGAGGACG 426
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                               16 CTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGG 75
                                                                                         les 240;
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      Chlamydomonas reinhardtii.
Chlamydomonas reinhardtii
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Grossman,A., Davies,J., Federspiel,N., Harris,E., Lefebvre,P., McDermott,J.P., Silflow,C., Stern,D. and Surzycki,R. Analyses of the Chlamydomonas reinhardtii Genome: A Model, Unicellular System for Analyzing Gene Function and Regulation in Vascular Plants; project phase 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Duke University
Durham, NC 27708-1000
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Unpublished (2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BG847089 780 bp mRNA lin
1024015H06.y2 C. reinhardtii CC-1690, normaliz
Chlamydomonas reinhardtii cDNA, mRNA seguence.
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919 613 8177
                                                                                                                                                                                                               /note-"vector: pBluescript II SK-; Site_1: EcoRI; Site_2: Xhol; This library, constructed by John Davies and Jeffrey McDermott, combines coNAs from CC-1500 cells grown to mid-log phase in TAP (acetate-containing) medium in the light, TAP medium in the dark, HS (minimal) medium in the light and was purified from each sample, pooled and cDNA synthesized. The cDNA was directionally cloned into lambda ZAP II (Stratagene) in the EcoRI (5') and XADI (3') sites. pBluescript II SK- plasmids were excised from the lambda ZAP clones by superinfection with ExAssist (Stratagene) phage. The library was normalized using method 4 described in Bonaldo et al (1996) Genome Research 6: 791-806."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chauser@duke.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Chlamydomonas reinhardtii"
/strain="CC-1690 wild type mt+ 21gr"
/db_xref="taxon:3055"
/clone_lib="C. reinhardtii CC-1690, normalized, Lambda Zap
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normalized, Lambda Zap II
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COMMENT

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             436 GAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCG 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     196 TCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCA 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              634 ACGACAGCGATGATGACGAGGAGGACAGCGATGACGACGATGATGAGGACATGG 690
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tetraodon nigroviridis
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Tetraodontidae; Tetraodon.
1 (bases 1 to 822)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tetraodon nigroviridis genome survey sequence PUC-Ori end of cl 007M14 of library H from Tetraodon nigroviridis, genomic survey
                                                                                                                                  Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.
                                                                                                                                                                                                                                                                                                     Genoscope
                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                           Saurin, W. and Weissenbach, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Roest-Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fish
Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetier,F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A. and
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GSS; genome survey seq
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                                                                                                                                                                                                                                                                            Submission
/organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
/clone="007M14"
                                                                                                          Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  437 AATCGC 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   196 CTAAGGTGATGCTAACCTGGAGTCAGGCTAAGTCGACGCTAACCCGGAGTCAGGCTAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  377 CCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGG 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         317 CGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGT 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 316 CCTGGAGTCAGGCTAAGGTGATGCTAACCCGGAGTCAGGCTAAGGTGATGCTAACCCGGA 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          256 GTCAGGCTAAGGTGATGCTAACCCGGAGTCAGGCTAAGTCGACGCTAACCCGGAGTCAGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 GGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACAC 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCAGGGCATCGCCAACGGGGA 316
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAA 256
                                                                                                                                                                                                                                         Anderson, O.A., Appels, R., Bailey, P., Blake, T., Close, T., Cloutier, S., Dubcovsky, J., Feuillet, C., Gale, M., Graner, A., Gustafson, P., Herrmann, R.G., Holton, T., Jacquemin, J.M., Jia, J., Joudrier, P., Langridge, P., Lazo, G.R., Lin, J.J., McGuire, P., Ogihara, Y., Pecchioni, N., Qualset, C., Schuch, W., Selvard, G., Shariflou, M., Sorrells, M., Warburton, M. and Wenzel, G.
                                                 Unpublished (2000)
Contact: Bailey P
Coreals Group, John Innes Centre
Norfolk, Norwich NR4 7UH UNITED KINGDOM
Tel: 44 1603 452571 ext. 2587
Fax: 44 1603 502241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldeae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bread wheat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE427000.1 GI:9424933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone PSR6561, mRNA sequence.
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   Email: paul.bailey@bbsrc.ac.uk
International Triticeae EST Cooperative (ITEC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Triticeae;
                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 640)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             147
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Triticum.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             640 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 822;
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Conserv
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                                                                                    AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     439 TCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCCCAGGGCCATCGCCAACA 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                478 AGCACAAGGGCAACAAGGTCAGCAGCTAGGACAAGGGCAACAAGGTCAGCAGCCAGTGA-536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418 GCAACTAGCACAAGGGCAACAAGGGCAGCAACCACGAAGTGCAACAAGGGCAGCAGCC 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 319 CCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCC 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     358 GCCAGGACAAGGGCAGCAACCAGGACAATTGCAACAACCAGCACAAGGGCAACAAGGGCA 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           379 AGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGAA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                259 GGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCAGGGCATCGCCAACGGGGACG 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              298 AACTTCTCCGTTGCAGCCAGGACAAGGGCAACCAGGGTACGACCCAACTTCTCCGCAACA 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         199 CCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       238 ACAAGGGCAACAGCCAGGACAATGGCAACAACCAGGACAAGGGCAACCAGGATACTACCC 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     139 GCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCG 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184 GCAACCGGGGCAAGGGCAGCCAGGGTACTACCCCAACTTCTC-----CGCAGCAATCAGG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         124 AGGTCAACAGCCAGGGCAAGGGCAACAAGGTCAGCAGCCAGGACAAGGGCAACAAGGTCA 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79 CCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATCCAGG 138
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i (bases l to 884)
Wing,R., Close,T.J., Kleinhofs,A., Wise,R., Kannangara,G., von Wetstein,D., Akhunov,E., Chin,A., Choi,D.W., Fenton,R.D., Kianian,P., Otto,C., Simons,K., Zhang,D., Begum,D., Frisch,D., Yu,Y.,
                                                                                                                                                                    Hordeum vulgare
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Lillopsida; Poales; Poaceae; Pooldeae
                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                                                                                                          884 bp mRNA linear EST 23-OCT-2001
HVSMEK0017J12f Hordeum vulgare testa/pericarp EST library
HVcDNA0013 (normal) Hordeum vulgare cDNA clone HVSMEk0017J12f, mRNA
                                                                                                                                                                                                                                                                               barley.
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Location/Qualifiers
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/dev_stage="1:1 mix 10:20 days post anthesis"
/note="Vector: Lambda ZAP II (Stratagene)"
/note="Vector: Lambda ZAP II (Stratagene)"
185 c 180 g 45 t 4 others
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Triticum aestivum"
/cultivar="Soleil"
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                                                                                                                                           Hordeum.
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Pred. No. 0.031;
0; Mismatches 226; Indels 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     226; Indels 11;
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                                           288 GACGACGCCACACATCAACAAGCACACTTCCGCGTCCCCTTCGTCTGCGGCTGCCGC 347
                                                                                                      195 ATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCC 254
                                                                                                                                                                                                                                   135 CAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGC 194
                                                                                                                                                                                                                                                                                                                                                                                                                             117 GCCCAGGGCGGCGTCGCCCGCATGTCGGAACCCGGGCCTCATCCGCGAAATTAAGCGCGCCC 176
                                                                                                                                                                    237 GAGTCCATCGGCGTCGACTACGTGGACGAGAGC------GAGGTCCTCACACTCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 GCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAG 74
                                                                                                                                                                                                                                                                                                                                                           75 GACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATC 134
                                                                                                                                                                                                                                                                                                 GTCACCATCCCGGTCATGGCCCAAGGCCCGCATCGGGCACTTCGTCGAGGCCCAGATCCTC 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      226;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Henry,D., Palmer,M., Rambo,T., Simmons,J., Oates,R. and Main,D. Development of a genetically and physically anchored EST resource for barley genomics: Morex testa/pericarp cDNA library Unpublished (2001) On Mar 13, 2001 this sequence version replaced q1:13322988.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clemson University
100 Jordan Hall, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 686.
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Total hq bases = 467
Seq primer: AATTAACCCTCACTAAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clemson University Genomics Institute
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Similarity 50.4%;
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864 656 4293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissuc_type="testa/pericarp"
/lab_bost="TyCl21"
/lab_bost="TyCl21"
/note="Yectra/pericarp"
/lab_bost="TyCl21"
/note="Yectra/pericarp"
/lab_bost="TyCl21"
/note="Yectra/pericarp"
/note="Yectra/perica
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/clone_lib="Hordeum vulgare testa/pericarp EST library
HYCDNA0013 (normal)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 79.2; DB 10; Length Pred. No. 0.034; o; Mismatches 213; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                468 GTCCGTGCCCTCCGCAGCATGGACGACGAGGTATTCTCCTATGCCAAGAGCATTGCC 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           375 GTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAG 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 315 GACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCC 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             348 AACCTGGGCGAGGCCCTCCGCCGCATCCGCGAGGGCGCCCATGATCCGCACCAAGGGC 407
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                                                                                      123 GAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTC 182
                                                                                                                              201 ATCAAGCGCGCCGTCACCATCCCAGTCATGGCCAAGGCCCGCATCGGGCCACTTCGTCGAG 260
                                                                                                                                                                                                                       141 GCCTATATCCGCGCCCAGGGCGGCGTCGCCCGCATGTCCGGACCCGGGGCCTCATCCGCGAA 200
                                             261 GCCCAGATCCTCGAGTCCATCGGCGTCGACTACGTGGACGAGAGC-----GAGGTC 311
                                                                                                                                                                            63 ATCGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGGCATCGCC 122
                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                             3 GTCTACGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGC 62
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EST0477 Triticum aestivum Lambda Zap Triticum aestivum cDNA clone
JAL-5B_H05_T3 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Anderson, J.M.
Crop Production & Pest Control Research Unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae; Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anderson, J.M., Williams, C.E. and Goodwin, S.B. Analysis of an EST database reveals a probable CF2 resistance gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: T3
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                                                                                                                                                                                                                                                                                                             Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon.4565"
/clone="JA1_5B_H05_T3"
/clone_lib="Triticum aestivum Lambda Zap"
/tissue_type="leaf"
/dev_stage="9 days old seedlings"
/dev_stage="9 days 158 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="P29"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Triticum aestivum"
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                                                                                                                                                                                                                                                                                                                              Score 78.4; DB 9; Length 990; Pred. No. 0.043;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                312 CTCACGCTCGCCGACGACGCCCACCACCAACAACCACAACTTCCGCGTCCCCTTCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             552 AAGAGCATCGCCGCACCATACGACCTCGTCATGCAGACCA 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      423 GACGCCGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCA 462
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       363 AACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAG 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     432 CGCACCAAGGGCGAGGCCGGCACCGGCAATGTCATCGAGGCCGTCCGCCACGTCCGCTCC 491
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       179 TGTGGCCGACGCCAGCAACCAGACTGTGGCCGACGCCAGCAACCAGACTGTGGC 238
                                                                                      119 CCAGACTGTGGCCGACGCCGCCAGCAGCAACCAGACTGTGGCCGACGCCGCCAGCAACCAGAC 178
                           89 CATCGCCAACGAAGCCGCCCCAGGGCCATCGCCGAGGACGC---CATCCAGGGCATCGC 145
                                                                                                                               29 CCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCACCCAGTG 88
                                                                                                                                                                                                   Pocar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AU176645 MRNA linear EST 21-MAR-1AU176645 Sugano-Kawakami 5' end enriched CDNA library (OLa) from HNI Oryzłas latipes cDNA clone OLa14.06c similar to pir IS282641 MRNA procyproline-rich glycoprotein - maize, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Department of Biological Sciences Graduate School of Science, University of Tokyo Hongo 7-3-1, Bunkyo-ku, Tokyo 113-0033, Japan Tel: 81-3-5841-4443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostai; Euteleostei; Neoteleostai Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha; Beloniformes; Adrianichthyidae; Oryziinae; Oryzias.

1 (bases 1 to 602)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Kiyoshi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Naruse,K., Mitani,H. and Tanaka,M.
Medaka EST Project in University of Tokyo (2001)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fax: 81-3-5841-4410
                                                                                                                                                                                                   Similarity
                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  naruse@biol.s.u-tokyo.ac.jp
                                                                                                                                                                                                                                                                                                                           /clone="OLa14.06c"
/clone_lib="Sugano-Kawakami 5'
(OLa) from HNI"
/tissue_type="whole body"
                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Oryzias latipes"
/strain="HNI"
                                                                                                                                                                                                                                                                                     /dev_stage="adult"
246 c 175 g
                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:8090"
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                                                                                                                                                                                              15.3%;
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                                                                                                                                                                                                 Score 76.6;
Pred. No. 0.
                                                                                                                                                                               Mismatches
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                                                                                                                                                                                                 0.078
                                                                                                                                                                                                                     DB 9; Length 602;
                                                                                                                                                                                                                                                                                                                                                                              end enriched cDNA library
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                                                                                                                                                                                                        Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.
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Roest-Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C.,
Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetier,F.,
Saurin,W. and Weissenbach,J.
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Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames, C., Fisher, C., Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A. and
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Human gene number estimate provided by genome wide analysis using Tetraodon nigroviridis DNA sequence
                                                                                                                                                                                                                                                   genome. For more information, please t
http://www.genoscope.cns.fr/Tetraodon
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044F19 of library G from Tetraodon nigroviridis, genomic survey
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/organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
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1; Mismatches 187; Indels
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ORGANISM
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AV438522/c
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MEDLINE
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  Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              434 GGGAATCGCCGAGGATGTCGCCAGGGCATCGCCAACGAGGACGCCCCCCAGGGCATCGC 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 569 CGATGACGACAACGGCAACGACAACAACAACAACAACAACAATGACAACGACGACAA 628
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            254 CAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCAGGGCATCGCCAACGG 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cocal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         168;
                                                                                                                                                                                                          The First Laboratory for Plant Gene Research Kazusa DNA Research Institute
Yana 1532-3, Kisarazu, Chiba 292-0812, Japan
Email: asamizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AV438522 AV438522 Porphyra yezoensis TU-1 Porphyra yezoensis CDNA clone PS037d03_r 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                     Generation of 10,154 expressed sequence tags from a leafy gametophyte of a marine red alga, Porphyra yezoensis DNA Res. 7, 223-227 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Porphyra yezoensis. Porphyra yezoensis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AV438522.1 GI:8593747
                                                                                                                                                                                                                                                                                                      Contact: Erika Asamizu
                                                                                                                                                                                                                                                                                                                                                                                                          Nikaido, I., Asamizu, E., Nakajima, M., Nakamura, Y., Saga, N. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Porphyra.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Rhodophyta; Bangiophyceae; Bangiales; Bangiaceae;
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58; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 401)
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/clone_lib="G"
/note="Genoscope sequence ID : C0BG044CC10SP1~end : PUC-Or1"
                                                                                 /clone="PS037d03_r"
/clone_lib="Porphyra yezoensis TU-1"
/cote="Vector: pBluescriptII SK'; Site_1: EcoRI; Site_2:
                                                                                                                                        /organism="Porphyra yezoensis"
/strain="TU-1"
/db_xref="taxon:2788"
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  14.78;
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                                                   124 g
Score 73.4;
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Length 401;
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Search completed: October 10, 2002, 20:28:30 Job time: 698.733 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity Matches 192; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  372 CGCCGGCGGCGTCGGCGACGCCGTCGCGTAGTACGGCGACGCGTAGGCGACGCCGT 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122 CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAAGGGCATCGCCAATGGGGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            312 CGCCGGCGCGCGGAGAGACGCAGTCGGGACGTACGGCACCGGCGTCGGCGACGCGGT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182 CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                   242 CCACGGCTTCGCCAACGG---GGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCA 298
                                                                                                                                    479 CGCCCAGGGCA 489
                                                                                                                                                                                                                        419 CGAGGACGCCGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGC 478
                                                                                                                                                                                                                                                                      132 CGCGGTCGCCGGCCGCCGTGGGCGACGCGGTCGGGACGTACGGCACCGGCGTCGGCGA 73
                                                                                                                                                                                                                                                                                                              359 CGCTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAA 418
                                                                                                                                                                                                                                                                                                                                                          192 GGGCACGTACGGCACGGGAGTGGGCGACGCACGTACGGCACCGGCGTGGGCGA 133
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                                                                                           12 CGCGGTGGGAA 2
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#12924 for g brain expres breast cell #23134 used

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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
          500
500
307.8
302.4
269.6
257.6
257.6
257.6
                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N_Geneseq_032802:*

1: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1980.DAT:*

2: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1982.DAT:*

3: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1982.DAT:*

4: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1983.DAT:*

5: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1983.DAT:*

5: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1985.DAT:*

5: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1986.DAT:*

7: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1986.DAT:*

8: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1988.DAT:*

9: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1989.DAT:*

10: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1989.DAT:*

11: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1999.DAT:*

12: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1999.DAT:*

13: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1999.DAT:*

14: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1999.DAT:*

15: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1999.DAT:*

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24: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA2000.DAT:*

24: /SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA2000.DAT:*
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Gapop 10.0 , Gapext 1.0
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Copyright (c) 1993 - 2002 Compugen Ltd.
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          748
1201
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      AAD11123
AAD11122
AAS72677
AAS72679
AAS72679
ABA66861
ABA33930
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AAI47072
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                                                          Human small cell l
Human small cell l
DNA encoding novel
DNA encoding novel
DNA encoding novel
Human foetal liver
Probe #12396 for g
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      Human
Probe
brain expres
#15758 used
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                                  WPI; 2001-457597/49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; lelmyosarcoma; synovial sarcoma; cytostatic; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human small cell lung cancer associated gene, DKFZp434C196 #2.
                                                                                            Stockert E, Scanlan MJ,
                                                                                                                                                   (SLOK ) SLOAN KETTERING INST (CORR ) CORNELL RES FOUND INC.
                                                                                                                                                                                                                (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                                                                                       21-JAN-2000; 2000US-0489101.
                                                                                                                                                                                                                                                                                                                                     19-JAN-2001; 2001WO-US02015.
                                                                                                                                                                                                                                                                                                                                                                                               26-JUL-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-SEP-2001 (first entry)
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                                                                                               Gure AO,
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                     Human small cell lung cancer associated gene, DKFZp434C196 #1.
                                                                     24-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 57; Page 116; 152pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded isolated nucleic acid comprising an NA Group 3 or 4 molecule -
                                                                                                                                                    AAD11122 standard; DNA; 1201 BP
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                                                                   (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 500; DB 22;
Pred. No. 1.4e-67;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated by antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leinyosarrouma or synovial sarcoma and neck or transitional cancer, leinyosarrouma or synovial sarcoma. The present sequence is human DKFZP43GC196 DNA. This small cell lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1201 BP; 255 A; 377 C; 349 G; 178 T; 42 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by isolated nucleic acid comprising an NA Group 3 or 4 molecule.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 57; Page 114-115; 152pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer associated gene is designated as NY-SCLC-13
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(SLOK ) SLOAN KETTERING INST C.
(CORR ) CORNELL RES FOUND INC.
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361 CTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACG
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                                             GCATCGCCAACGGGGACGCCACCAAGGGCATGGGCCAACGAGGTCACCATCCACGGCATCG
                                                                                      GCATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCG
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                                                                                                                                                                          TCCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 500; DB 22; 100.0%; Pred. No. 1.3e-67;
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                                              The invention relates to isolated polynucleotide (I) and CC polymeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CPR primers of the control of the control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
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                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; SEQ ID No 8481; 103pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
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food supplement; medical imaging; diagnostic; genetic disorder; ss
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Sequence 1593 BP; 444 A; 429 C; 434 G; 286 T; 0 other:
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                                    ftp.wipo.int/pub/published_pct_sequences.
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Best Local Similarity
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                      P-PSDB; ABG08491
                                      WPI; 2001-639362/73
                                                                        Drmanac RT, Liu C,
                                                                                                           (HYSE-) HYSEQ INC.
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23-AUG-2000; 2000US-0649167.
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78.8%;
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Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
                                                                                          DNA encoding novel human diagnostic protein #8482
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CC art for the sequence data for this patent did not appear in the printed content of the product as obtained in electronic format directly from WIPO care for the sequence data for this patent did not appear in the printed content of the product and the content of the printed content of the product and the printed content of the printed content of the product and the printed content of the product and the printed content of the product and the printed content of the printed content of the product and the printed content of the 
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AAS72679;
                                                    AAS72679 standard; cDNA; 2922 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         321 ACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCCAG 380
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                                                                                                                                                                                                                       GC---CGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCGCCAAC 497
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                          2026 ATCGCCAACGAGGACGCCCCCAGGGCATCGCCAACGAGGACGCCGCCCCACGGAATCGCC
                                                                                                                                           1966 CACGATATCACTAACGAGGACGCTGTCCACGGCATCGCTAACGAGGCCGCCGCCCAGGGC 2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2922 BP; 833 A; 829 C; 806 G; 454 T; 0 other;
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23-AUG-2000; 2000US-0649167
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                                                                                                                                                                        84 CAGTGCATCGCCAAGGAGGAAGCCGCCCAGGGCCATCGC---CGAGGACGCCCATCCAGGGC 140
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supplement; medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                                            362;
                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                75.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 6.3e-33;
                                                                                                                                                                                                                                                                                                                                                                        Mismatches 114; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                             Length 2922;
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   Query Match
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21-SEP-2000;
27-SEP-2000;
                                                         The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid probe of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
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                                                                                                                                                                                                                                                Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human fetal liver - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-FEB-2000;
26-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200157277-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; foetal liver; gene expression; single exon nucleic acid probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human foetal liver single exon nucleic acid probe #15166.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-FEB-2002
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                                                                                                                                                                                                                   Claim 4; SEQ ID NO 15166; 639pp + sequence listing; English.
                                                                                                                                                                                                                                                                                                 WPI; 2001-483447/52.
                                                                                                                                                                                                                                                                                                                               Penn SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JUN-2000;
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                                 Sequence 518 BP; 140 A; 170 C; 139 G; 69 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                            (MOLE-) MOLECULAR DYNAMICS INC
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2000US-0207456.
2000US-060840B.
2000US-0632366.
2000US-0234687.
2000US-0236359.
2000US-0236359.
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                                                                                                                                                                                                                                                                                                                               Chen W, Rank DR;
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   Score 257.6;
   DB 22;
Length 518;
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                                                                            04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                             Human; gene expression; heart; microarray; vascular system; probe; cardiovascular disease; hypertension; cardiac arrhythmia; congenital heart disease; ss.
                                                                                                                                                                                                                                                                                                                                                                            Probe #12396 for gene expression analysis in human heart cell sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                         ABA33930;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABA33930 standard; DNA; 518
   Penn SG,
                                                                                                                                                                                                                                                                                 Homo sapiens.
                               (MOLE-) MOLECULAR DYNAMICS INC.
                                                                                                                                                                                        30-JAN-2001; 2001WO-US00666
                                                                                                                                                                                                                      09-AUG-2001
                                                                                                                                                                                                                                                    WO200157274-A2
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   Hanzel DK,
                                                                            2000US-0180312.
2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
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                                                                2000GB-0024263
   Chen W,
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0; Mismatches 114;
     Rank DR;
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Best Local :
  Human brain expressed single exon
                             05-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention relates to single exon nucleic acid probes for measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the
                                                                               AAK15297 standard; DNA; 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 4; SEQ ID No 12396; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 518 BP; 140 A; 170 C; 139 G; 69 T; 0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   congenital heart disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                               TCTACAAGCCGTCGCTAACA 518
                                                                                                                                                                                                                        GGACGCCCCAGGGAATCG----CCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGC 478
                                                                                                                                                                        CGCCCAGGGCATCGCCAACA 498
                                                                                                                                                                                               GGACACCATACAAGGCATCGGTAATGAGGACGTTGTATATGACATCGCTAACAAGGACAC
                                                                                                                                                                                                                                                  TA---ATGACACCGTACAAGGCA-CGCTAACGAGGATGCTGTACACGACATCGCTAATGA
                                                                                                                                                                                                                                                                                                   CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC
                                                                                                                                                                                                                                                                                                                           CATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC
                                                                                                                                                                                                                                                                                                                                                     CCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
                                                                                                                                                                                                                                                                           TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCCATCGCCAACGA 421
                                                                                                                                                                                                                                                                                                                                                                             CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGT 241
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   376;
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75.2%;
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  probe SEQ ID
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    NO: 15288.
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                                                                                                                                                                                  182
 383
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TA---ATGACACCGTACAAGGCA-CGCTAACGAGGATGCTGTACACGACATCGCTAATGA 438
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04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
                                                                                                                                       03-AUG-2000;
                                                                                                                                                                                                                                       30-JAN-2001;
                                                                                                                                                                                                                                                                          09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                            epilepsy; cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                              Human; brain expressed exon; gene expression analysis; probe;
microarray; Alzheimer's disease; multiple sclerosis; schizophrenia;
                                     (MOLE-) MOLECULAR DYNAMICS
Hanzel DK,
                                                                          2000US-0180312.
2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0234389.
2000US-0236359.
                                                                                                                                                                                                                                       2001WO-US00667
```

exon nucleic acid probes for analyzing gene expression Ď. human

Chen W, Rank DR;

Example 4; SEQ ID NO: 15288; 650pp + Sequence Listing; English

probes which are derived from genomic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples, which may enable the diagnosis and improved treatment of nervous system diseases such as Alzheimer's disease, multiple sclerosis, schizophrenia, epilepsy and cancers. The present sequence is one of the probes of the The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the hu

Sequence 518 BP; 140 A; 170 C; 139 G; 69 T; 0 other;

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Query Match
Best Local :
362 TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
                                                                                                       302 CATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC
                                                                                                                                                                                                                                                                                                                                                                            143 CGAGGACGCCGCCCACGGAATCGCCAGCGAGGACGCCCCAGGGCCATCGCCAACGAGGT
                                                                                                                                                                                                CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGG
                                                                                                                                                                                                                                                                                               CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGT
                                                     CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                               CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCCAGGGCCATCGCCAATGGGGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTACGGCATTGCTGAGGACGCTGCCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCAT
                                                                                                                                                             CCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCTAACGAGGCCGCCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCGCCAA 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCTAATGAGGACACCCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC--- 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGGACGCTGTCCACGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     51.5%;
75.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 257.6; DB 22; Length 518; Pred. No. 5.1e-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches 114; Indels 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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361 322 301

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RESULT 9
AAI47072
ID AAI4
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26-MAY-2000; 2000US-0207456.

30-JUN-2000; 2000US-0608408.

03-AUG-2000; 2000US-0632366.

21-SEP-2000; 2000US-0234687.

27-SEP-2000; 2000US-023659.

04-OCT-2000; 2000GB-0024263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Probe; microarray; hu
genetic disorder; ss
                                                                                                                                                                                                                                                        Sequence 518 BP; 140 A; 170 C; 139 G; 69 T; 0 other;
                                                                                                                                                                                                                                                                                   The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placents. The probes are useful for antenatal diagnosis of human genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                  Claim 25; SEQ ID No 15758; 654pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                            Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human placenta \dot{\,}
                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-488897/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MOLE-) MOLECULAR DYNAMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JAN-2001; 2001WO-US00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200157272-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Probe #15758 used to measure gene expression in human placenta sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAI47072 standard; DNA; 518 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         499 TCTACAAGCCGTCGCTAACA 518
     143
                       122 CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGGTTGCCCAGGGCATCGCCAATGGGGT 181
                                                                                                                             83
                                                                                              65 CGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC--- 121
                                                                                                                                                                                                           госат
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCCCAGGGCATCGCCAACA 498
     CGAGGACGCCGCCCACGGAATCGCCAGCGAGGACGCCGCCCAGGGCATCGCCAACGAGGT 202
                                                                   CGCTAACGAGGCCGCCGAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCGCCAA 142
                                                                                                                                                                                               376;
                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hanzel DK,
                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human; placenta; antenatal diagnosis;
                                                                                                                                                                                                         51.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chen W,
                                                                                                                                                                                             0;
                                                                                                                                                                                                                      Score 257.6;
                                                                                                                                                                                           Pred. No. 5.1e-31;
); Mismatches 114; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rank DR;
                                                                                                                                                                                                                          DB 22; Length 518;
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AAS72676
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The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as
                                                                                                                                                                                                        New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; chromosome mapping; gene mapping; gene therapy; forensic;
food supplement; medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA encoding novel human diagnostic protein #8480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13 FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAS72676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAS72676 standard; cDNA; 3345 BP
                                                                                                                                                             Claim 1; SEQ ID NO 8480; 103pp; English.
                                                                                                                                                                                             biodiversity
                                                                                                                                                                                                                                                                            P-PSDB;
                                                                                                                                                                                                                                                                                                                     Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                   (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                  31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  499 TCTACAAGCCGTCGCTAACA 518
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             439 GGACACCATACAAGGCATCGGTAATGAGGACGTTGTATATGACATCGCTAACAAGGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        422 GGACGCCGCCCAGGGAATCG----CCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGC 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        383 TA---ATGACACCGTACAAGGCA-CGCTAACGAGGATGCTGTACACGACATCGCTAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302 CATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                263 CCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182 CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCCATCGCCAACTGGGACGCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
                                                                                                                                                                                                                                                                                          2001-639362/73.
                                                                                                                                                                                                                                                                            ABG08489
                                                                                                                                                                                                                                                                                                                                                                                  2000US-0540217.
2000US-0649167.
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RESULT 11
AAS72321
ID AAS72
X P X O X X X X X D X A C X
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic coding sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO
             WO200175067-A2
                                                                                                                               DNA encoding novel human diagnostic protein #8125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2316
                                              Homo sapiens.
                                                                                                                                                                13-FEB-2002 (first entry)
                                                                                                                                                                                                                                  AAS72321 standard; cDNA; 3522 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2256
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                                                                                                                                                                                                                                                                                                                      2552 TCTACAAGCCGTCGCTAACAAG 2573
                                                                                                                                                                                                                                                                                                                                                                                       2492 GGACACCATACAAGGCATTGGTAATGAGGACGTTGTATATGACATCGCTAACAAGGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2136 CGCTAACGAGGCCGCCGACAAGGGCATCGCCAACGAGGACGCCGCCCCAGGGCATCGCCAA 219:
                                                                              food supplement; medical imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2376 CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC 2435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2076 CAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGGACGCTGTCCACGGCAT 2135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3345 BP; 954 A; 940 C; 913 G; 538 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                        479 CGCCCAGGGCATCGCCAACAAG 500
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           362 TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            242 CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGG 301
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 CTACGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCAT 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       itp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                        GGACGCCGCCCAGGGAATCG---CCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGC 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCACGGCATCGCCAACGAGGATGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC--- 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TA---ATGACACCGTACAAGGCA-CACTAACGAGGACGCTGTACACGACATCGCTAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCCGCCCAGGGCATCGCCAACGAGGACGCCCCCCCCAGGGCATCGCCAAGGAGGACGCCGC 2315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGAGGACGCCGCCACGGAATCGCCAGCGAGGACGCCCAGGGCATCGCCAACGAGGT 2255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     372;
                                                                            chromosome mapping; gene mapping; gene therapy; forensic
upplement; medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.0%; Score 250; DB 23; 74.1%; Pred. No. 5.6e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 3345;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                            2493
                                                                                                                                              2433
                                                                                                                                                                                                                                                                                   2313
                                                                                                                                                                                                                 2373 CGAGGACGCCCCCACGGAATCGCCAGCGAGGACGCCCCCCAGGGCATCGCCAACGAGGT 2432
                                                                                                                                                                                                                                                                                                                                                    2253 CAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGGACGCTGTCCACGGCAT 2312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3522 BP; 1005 A; 1006 C; 959 G; 552 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-OCT-2001
                                           302 CATCGCCAACGGGGACGCCAACGAGGGCATGGGCAACGAGGTCACCATCCCACGGCATCGC 361
                                                                                                             242
                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                    65 CGCTAATGAGGACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC--- 121
                                                                                                                                                                                                                                                                                                                                                                       Local
         CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC
                                                                          CCACGGCATCGCCAACGAGGATGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
                                                                                                           CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCAGGG 301
                                                                                                                                              CGCCGCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCGCCAAGGAGGACGCCGC 2492
                                                                                                                                                                                CGCCGCACAGGGCATCGCCAATGAGGACGCCCACCCCAGGGCATCGCCAACTGGGGACGCCGT 241
                                                                                                                                                                                                                                                CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGT 181
                                                                                                                                                                                                                                                                                   CGCTAACGAGGCCGCCGACAAGGGCATCGCCAACGAGGACGCCCCAGGGCATCGCCAA 2372
                                                                                                                                                                                                                                                                                                                                                                                                                        372;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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50.0%; score 250; DB 23; 74.1%; Pred. No. 5.6e-30;

Length 3522; Indels 10;

Gaps

4.

2552

0;

Mismatches 120;

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The invention relates to isolated polynucleotide (I) and C polypeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The C polynucleotides are also used in diagnostics as expressed sequence tags CC for identifying expressed genes. (I) is useful in gene therapy techniques CC to restore normal activity of (II) or to treat disease states involving CC (II). (II) is useful in gene therapy techniques CC and food supplement. (II) and its binding partners are useful in medical CC imaging of sites expressing (II). (I) and (II) are useful in medical CC imaging of sites expressing (II). (I) and (II) are useful for treating CC The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations CC responsible for genetic disorders or other traits to assess biodiversity CC and to produce other types of data and products dependent on DNA and CC diagnostic coding sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of the invention.

CC vertication, but was obtained in electronic format directly from WIPO CC and to product data for this patent did not appear in the printed CC specification, but was obtained in electronic format directly from WIPO
at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID No 8125; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-MAR-2000; 2000US-0540217
23-AUG-2000; 2000US-0649167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABG08134.
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RESULT 12
ABA54299
ID ABA54
XX ABA54
XX ABA54
XX O1-FE
XX Human
XX Homo
XX Homo
XX Homo
XX G200
PN W0200
XX G9-AU
PF 30-JA
XX 30-JA
XX 30-JA
XX 14-SE
PR 04-FE
PR 04-FE
PR 04-FE
PR 04-OC
XX W0LE
XX MPI;
XX Human
XX The i
CC measu
CC flom
CC Fetal
CC Note:
CC Pribe

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                                                                                                                          Matches 299;
                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
                                                                                                                                                                                                                                         The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid probe of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2613 TA---ATGACACCGTACAAGGCA-CACTAACGAGGACGCTGTACACGACATCGCTAATGA 2668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2729 TCTACAAGCCGTCGCTAACAAG 2750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2669 GGACACCATACAAGGCATTGGTAATGAGGACGTTGTATATGACATCGCTAACAAGGACAC 2728
                                                                                                                                                                                                       Sequence 495 BP; 121 A; 174 C; 129 G; 71 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human fetal liver -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200157277-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; foetal liver; gene expression; single exon nucleic acid probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human foetal liver single exon nucleic acid probe #2604.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABAS4299 standard; DNA; 495 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 2604; 639pp + sequence listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JAN-2001; 2001WO-US00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MOLE-) MOLECULAR DYNAMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             479 CGCCCAGGGCATCGCCAACAAG 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 422 GGACGCCGCCCAGGGAATCG----CCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGC 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   362
  103 AAGCCGCCCAGGGCATCGC----CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTG 159
                                      108 ATGAGGACACCGTACACAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGG 167
                                                              Loca]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
                                                                                                                        Similarity 77.3
99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-0180312.
2000US-0207456.
2000US-0508408.
2000US-0632366.
2000US-0234587.
2000US-0236559.
2000US-0236559.
2000US-0236559.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                         47.08;
77.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chen W,
                                                                                                                        0;
                                                                                                                                           Score 235; DB 22;
Pred. No. 1.3e-27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rank DR;
                                                                                                                        Mismatches
                                                                                                                        85;
                                                                                                                                                              Length 495;
                                                                                                                        Indels
                                                                                                                        ω
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                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
                                                                                                                                                                                                                                                                                                                                    Penn SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABA24056;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              408
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04-FEB-2000; 2000US-0180312.

26-MAX-2000; 2000US-0508408.

30-UUN-2000; 2000US-0508408.

03-AUG-2000; 2000US-0632366.

21-SEP-2000; 2000US-0234687.

27-SEP-2000; 2000US-0234359.

04-OCT-2000; 2000GB-0024263.
The present invention relates to single exon nucleic acid probes for measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; gene expression; heart; microarray; vascular system; probecardiovascular disease; hypertension; cardiac arrhythmia;
                                                                                                                                                                                                                                                                                                                                  Claim 1; SEQ ID No 2522; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Single exon nucleic acid probes for analyzing gene expression in human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JAN-2001; 2001WO-US00666.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W0200157274-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     congenital heart disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Probe #2522 for gene expression analysis in human heart cell sample
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABA24056 standard; DNA; 495 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MOLE-) MOLECULAR DYNAMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                468 CCATATATGACATCGCTAATGACACCG 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             400 CCGCCCAGGGCATCGCCAACGAGGACG 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 348 CCAACGAGGACGCCGTCCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGCTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280 CCAACGGGACGCCCCAGGGCATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 288 GCATCGCCAACGAGGTCGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        160 CCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGCTGTCCACGGCATCGCTAACGAGGCCGCCGACGGCCATGGCCATCGCCAACGAGGACGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGATGCCGTGCACGGCATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen W, Rank DR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             399
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RESULT 14

AAK02583

ID AAK02

XX AAK02

XX O5-NO

DY 05-NO

XX Human

XX Human

XX Homo

XX Homo

XX O2000

XX O2000

XX O3-AU

PR 04-FE

PR 26-MA

XX O4-FE

PR 30-JA

YR 30-J
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Best Local :
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                                                                                                                                                                                                                                                     04-FEB-2000;
26-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           congenital heart disease. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
Penn SG,
                                                                                                                                                                                                                                                                                                                                             30-JAN-2001; 2001WO-US00667
                                                                                                                                                                                                                                                                                                                                                                                                     09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; brain expressed exon; gene expression analysis; probe; microarray; Alzheimer's disease; multiple sclerosis; schizophrenia;
                                                    (MOLE-) MOLECULAR DYNAMICS INC
                                                                                                               04-OCT-2000;
                                                                                                                                                                                                    03-AUG-2000;
                                                                                                                                                                                                                              30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200157275-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        epilepsy; cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human brain expressed single exon probe SEQ ID NO: 2574.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAK02583 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   348
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGATGCCGTGCACGGCATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATG
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Hanzel DK,
                                                                                                                                      ; 2000US-0180312.
; 2000US-0207456.
; 2000US-0608408.
; 2000US-0632366.
; 2000US-0234687.
; 2000US-0236359.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                               2000GB-0024263.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47.0%;
77.3%;
Chen W,
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Pred. No. 1
Rank DR;
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RESULT 15
AA13343
AC AA133
XX 17-OC
XX 17-OC
XX Probe
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XX Probe
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XX Probe
XX PO200
XX 09-AU
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XX 30-AU
PR 04-FE
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                                                                                                                                                                                               Probe #2635 used to measure gene expression in human placenta sample
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                               30-JAN-2001; 2001WO-US00663.
                                                              09-AUG-2001.
                                                                                          WO200157272-A2
                                                                                                                      Homo sapiens
                                                                                                                                                       genetic disorder;
                                                                                                                                                                     Probe; microarray;
                                                                                                                                                                                                                              17-OCT-2001
                                                                                                                                                                                                                                                             AAI33949;
                                                                                                                                                                                                                                                                                         AAI33949 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 495 BP; 121 A; 174 C; 129 G; 71 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 4; SEQ ID NO: 2574; 650pp + Sequence Listing; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         299;
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                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                     human; placenta; antenatal diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47.08;
77.38;
                                                                                                                                                                                                                                                                                           495

 Mismatches

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Pred. No. 1
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04-FEB-2000; 2000US-0180312

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30-JUN-2000; 2000US-0608408.
03-AUG-2000; 2000US-0233667.
21-SEP-2000; 2000US-0234687.
27-SEP-2000; 2000US-02345359.
04-OCT-2000; 2000GB-0024263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placenta. The probes are useful for antenatal diagnosis of human genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 25; SEQ ID No 2635; 654pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human placenta \boldsymbol{\cdot}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-488897/53.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 495 BP; 121 A; 174 C; 129 G; 71 T; 0 other;
                                                                         468 CCATATATGACATCGCTAATGACACCG 494
                                                                                                                400 CCGCCCAGGGCATCGCCAACGAGGACG 426
                                                                                                                                                                                          340 AGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGG 399
                                                                                                                                                                                                                                348 CCAACGAGGACGCCGTCCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGCTAACG 407
                                                                                                                                                                                                                                                    280 CCAACGGGACGCCCAGGGCATCGCCAACGGGGACGCCAACGACGAAGGCCATGGGCAACG 339
                                                                                                                                                                                                                                                                                                          220 GCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCG 279
                                                                                                                                                                                                                                                                                                                                                                                        228 CCCAGGGCATCGCCAACGAGGACGCCGCCCACGGAATCGCCAGCGAGGACGCCGCCCCAGG 287
                                                                                                                                                                                                                                                                                                                                                                                                                          160 CCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGG 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  168 ACGCTGTCCACGGCATCGCTAACGAGGCCGCCGCCCAGGGCATCGCCAACGAGGACGCCG 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         103 AAGCCGCCCAGGCCATCGC---CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTG 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            108 ATGAGGACACCGTACACAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGG 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGATGCCGTGCACGGCATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATG 467
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Title:
Perfect score:
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Maximum DB seg length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
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         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
     73.4
73.2
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14.9 1248

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14.7 12598

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14.3 17.8 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Issued_Patents_NA:*
1    /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2    /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3    /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
4    /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5    /cgn2_6/ptodata/2/ina/backfiles1.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
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Match Length DB
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Listing first 45 summaries
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   4 US-09-103-840A-2
4 US-09-121-649-7
3 US-09-026-556-17-3
4 US-09-026-556-167
4 US-09-026-556-167
4 US-09-026-556-167
4 US-09-026-556-167
4 US-09-105-537-3
4 US-09-105-537-3
4 US-09-105-537-1
4 US-09-105-537-1
4 US-09-105-691-2
5 US-09-385-028-1
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7 US-09-266-556-179
7 US-09-266-556-179
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7 US-09-056-556-178-1
7 US-09-056-556-182
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Sequence 4, Appli
Sequence 176, App
Sequence 176, Appli
Sequence 167, Appli
Sequence 167, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 21, Appli
Sequence 21, Appli
Sequence 1, Appli
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Sequence 176, Appli
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Sequence 2, Appli
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US-09-197-649-7
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14.0 30001 1 2 4 1 1 2 8 9 8 5 4 1 1 3 .8 1 2 5 8 8 2 1 1 3 .2 1 3 .2 1 3 .2 5 7 9 2 1 3 .2 6 3	45	44	43	42	41	40	39	38	37	36	ω 5	34	ω ω	32	31	30	29	87
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+ u	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.4	13.4	13.5	13.8	13.8	14.0	14.0	14.2
1 US-08-125-468-1 2 US-08-2474-933-1 4 US-09-05-556-182 2 US-08-387-942C-1 4 US-09-372-422A-23 2 US-08-319-075-25 2 US-08-419-075-25 2 US-08-419-075-2 2 US-08-737-5248-1 2 US-08-737-5248-1 2 US-08-419-075-2 2 US-08-419-075-2 2 US-08-419-075-2 2 US-08-419-075-2 2 US-08-419-075-2 2 US-08-419-075-2 2 US-08-419-075-2 2 US-08-419-075-2 2 US-08-419-075-3 2 US-08-419-075-3	459	2123	2123	653	647	639	639	579	579	1187	352	281	1193	12588	985	30001	30001	K7CTTP5
US-08-415-468-1 US-08-474-933-1 US-08-474-933-1 US-09-056-556-182 US-09-372-422A-23 US-08-419-075-25 US-08-419-075-25 US-08-419-075-2 US-08-419-075-3 US-08-419-075-2 US-08-419-075-2 US-08-419-075-2 US-08-419-075-2 US-08-419-075-2 US-08-419-075-2 US-08-419-075-2 US-08-419-075-3 US-08-419-075-3 US-08-419-075-3 US-08-419-075-3 US-08-419-075-3	N	N	N	N	N	N	N	N	N	سر	N	N	4	N	4	N	ب	4
	US-08-387-942C-31	US-08-419-075-1	US-08-737-524B-9	US-08-419-075-18	US-08-419-075-20	US-08-419-075-2	US-08-737-524B-12	US-08-419-075-3	US-08-737-524B-17	US-08-440-856A-2	US-08-419-075-25	US-08-419-075-4	US-09-372-422A-23	US-08-387-942C-1	US-09-056-556-182	US-08-474-933-1	US-08-125-468-1	T-W050-COT-60-50

## ALIGNMENTS

```
APPLICANT: Gold, Larry
APPLICANT: Tuerk, Craig
APPLICANT: Tuerk, Craig
APPLICANT: Tuerk, Craig
APPLICANT: Pribnow, David
APPLICANT: Smith, Jonathan D.
TITLE OF INVENTION: Systematic Polypeptide Evolution by Reverse Translation
FILE REFERENCE: MEXO2/C1-CON
CURRENT APPLICATION NUMBER: US/09/197,649
CURRENT APPLICATION NUMBER: 07/829,461
EARLIER APPLICATION NUMBER: 07/829,461
EARLIER APPLICATION NUMBER: 07/829,461
EARLIER APPLICATION NUMBER: 07/839,055
EARLIER FILING DATE: 1992-01-31
EARLIER FILING DATE: 1991-08-01
EARLIER FILING DATE: 1991-08-02
NUMBER: DATE: 1990-08-02
NUMBER: DATE: 1990-08-02
SEQ ID NO 7
SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Description of Artificial Sequence: Sequence OTHER INFORMATION: having a 120 repeat of ACG flanked by fixed OTHER INFORMATION: fragments having NCOI restriction sites. US-09-197-649-7
g
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
173 CANTGGGGTCGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTG 232
                                                                                                                                                                                                                                                                                                                                                           113 GGGCATCGCCGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCCAGGGCATCGC 172
                                                  293 CGCCCAGGGCATCGCCAACGGGGACGCCCACCAAGGGCATGGGCAACGAGGTCACCATCCA 352
                                                                                                 233 GGACGCCGTCCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGC 292
                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                        213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               390
                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 57.0%;
                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       Score 116.4; DB 4; Length; pred. No. 4.9e-13; 0; Mismatches 161; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4; Length 390;
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RESULT 2
US-09-103-840A-2/c
US-09-103-840A-2/c
; Sequence 2, Application US/09103840A
; Patent No. 6294328
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                       Db 3937927 GCCGCCTCGCCGCCGGTACCGCCGTTGCCGCCGTTGCCGCCATCGCCGCCAGTGTCGCC 3937868
                                                                                                                                                                                                                                                                                                                                                                               Db 3937987 GGTGCCGCCATCGCCGCCATTGCCGGCCGCCGCCGGTGCCGCCGGCGCCGCCGACCTC 3937928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Db 3938107 GCCGCTGCCGCCGGTGCCGCCGTCGCCGGATCCGCCGGGGGTCGCCGAGGCC 3938048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Db 3937807 CCCGTTGCCGCCGGGGTCGTCAGTGAGTGGGCCGTGGCCGCCGATGGCCCCGTTGCCGCC 3937748
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: WHITE, Owen R.
APPLICANT: FRASER, Claire M.
APPLICANT: VENYER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CURRENT ENTILING DATE: 1198-06-24
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT ELLING DATE: 1198-06-24
RUMBER OF SEQ ID NOS: 2
                                                                                                                                                               3937867 GCCAAGGCTGCCGATGCCCGCGCCGCCGGTGCCGCTGCCGCTGTGCCGCCGGTGCC 3937808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: FLEISCHMAN, Robert D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: CDC 1551 OTHER INFORMATION: "n" bases at various positions throughout the sequence OTHER INFORMATION: represent a, t, c or q
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
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                                                                                                           393 GAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCCAGGGAATCGCCGAGGATGTC
                                                                                                                                                                                                                   333 GGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCCAGGGCATCGCTAAC 392
                                                                                                                                                                                                                                                                                                                        273 AGCTTCGCCAACGGGGACGCCGCCCAGGGCATCGCCAACGGGGACGCCACCAAGGGCATG 332
                                                                                                                                                                                                                                                                                                                                                                                                                                213 ACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACGGGGACGCCGTCCTC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     153 GAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCGCCAATGAGGACGCC 212
         453 GCACAGGGCATCGCCAACGAGGACGCCGCCCAGGGCCATCGCCAAC 497
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|||| ||| |||
362 CGACGACGCCATGG 375
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     353 CGGCATCGCTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCAT 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93 GCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATCCAGGGCATCGCCAACGAG 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33 GGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCACCCAGTGCATC 92
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Similarity 49.2%;
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; Sequence 4, Application US/09023173 ; Patent No. 6066781 ; GENERAL INFORMATION:
                                                                               RESULT 4
US-09-023-173-4
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US-09-197-649-7/c
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APPLICANT: Tuerk, Crai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Ver. SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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Patent No. 6194550
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Systematic Polypeptide Evolution by Reverse Translation FILE REFERENCE: NEXOZ/CI-CON COURENT APPLICATION NUMBER: US/09/197,649 CURRENT FILING DATE: 1998-11-23 EARLIER APPLICATION NUMBER: 07/239,461 EARLIER APPLICATION NUMBER: 07/239,055 EARLIER APPLICATION NUMBER: 07/239,055 EARLIER FILING DATE: 1992-01-31 EARLIER FILING DATE: 1991-08-01 EARLIER FILING DATE: 1991-08-01 EARLIER FILING DATE: 1991-08-01 EARLIER FILING DATE: 1991-08-01 EARLIER FILING DATE: 1990-08-02 NUMBER: 07/561,968 EARLIER FILING DATE: 1990-08-02 NUMBER: 07/561,968 EARLIER FILING DATE: 1990-08-02 NUMBER: 07/561,968 EARLIER FILING DATE: 1990-08-02
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence: Sequence OTHER INFORMATION: having a 120 repeat of ACG flanked by fixed OTHER INFORMATION: fragments having Ncol restriction sites.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 390
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 CCGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGG 180
                                                                                                                                                                                                                                           481 CCCAGGGCATCGCC 494
                                                                                                                                                                                                                                                                                                                                                 421 AGGACGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCG 480
                                                                                                                                                                                                                                                                                                                                                                                                        361 CTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 TCCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGG
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INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 1140 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/038,16
EILING DATE: 13-FEB-1997
ATTORNEY/AGENT INFORMATION:
NAME: PELITHORY, JOANNER: P42995
REFISTRATION NUMBER: 04695
REFERENCE/DOCKET NUMBER: 0665
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-324-0880
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TOPOLOGY: Linear
IMMEDIATE SOURCE:
CLONE: codon-optimized RAmy3D signal-prosubtilisin BPN'
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APPLICANT: Rodriguez, Raymond L.
TITLE OF INVENTION: Production of Mature Proteins
TITLE OF INVENTION: in Plants
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PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 60/038,168
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
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CORRESPONDENCE ADDRESS:
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630 CAACGGCATCGAGTGGGCCATCGCCAACAACATGGACGTCATCACCATGAGCCTCGGCGG 689
                                            368 GGACGCCGTCCA---GGGCATCGCTAACGAGGTGGCCCCCAGGGCATCGCCAACGAGGA 424
                                                                                            570 CAGCCTCTACGCCGTCAAGGTACTCGGCGCCGACGGCAGCCGGCCAGTACAGCTGGATCAT 629
                                                                                                                                         308 CAACGGGGACGCCAACGAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGA 367
                                                                                                                                                                                              510 CGCCGGCACCGTCGCCGCCCTCACCAACAGCATCGGCGTCCTCGGCGTCGCCCCGAGCGC 569
                                                                                                                                                                                                                                        248 CTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGGCATCGC 307
                                                                                                                                                                                                                                                                                        450 TAGCATGGTCCCGAGCGAGACCAACCCGTTCCAGGACACCAACAGCCATGGCACCCACGT 509
                                                                                                                                                                                                                                                                                                                                       188 ACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGG 247
                                                                                                                                                                                                                                                                                                                                                                                       390 CGCCGTCATCGACAGCGGCATCGACAGCAGCCACCCGGACCTCAAGGTCGCCGGCGGAGC 449
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     270 CGCCTACGTCGAGGAGGACCACGTCGCCCACGCATATGCACAGAGCGTCCCGTACGGCGT 329
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68 TAATGAGGACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGA 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    239; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 15.4%;
Similarity 48.8%;
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RESULT 5
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INFORMATION FOR SED ID NO: 17
SEQUENCE CHARACTERISTICS:
LENGTH: 494 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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TELEPHONE: (206) 622-4900
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CORRESPONDENCE ADDRESS:
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APPLICANT: Skeiky, Yasir A.W.

APPLICANT: Dillon, Davin C.

TITLE OF INVENTION: COMPOUNDS AND METHODS FOR THE PREVENTION AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION: NAME: Maki, David J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         750 cercercecc 759
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: 63
256 CTTTGCCGGTGCCGGCGGCCAGGGCGGCCTCGGTGGGCAGGGCGGCAATGGCGGCGGCTC 315
                                                                                     136 CGGCAAGGGCGGCTTCGGCGGCGACGGCGGTCAGGGCGGCCCCAACGGCGGCGGTACCGT 195
                                                                                                                                                                                                                   158 TGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCGCCAATGAGGACGCCACCCA 217
                                                                                                                             218 GGGCATCGCCAACTGGGACGCCGTCCACGGCCTTCGCCAACGGGGACGCCGTCCTCAGCTT 277
                                          278 CGCCAACGGGGACGCCCAGGGCATCGCCAACGGGGACGCCACCAAGGGCATGGGCAA 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Maki, David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/0 FILING DATE: 07-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                           38 CGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCACCCAGTGCATCGCCAA 97
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                                                                                                                                                                                                                                                                76 CCAAGGCGGCAGCGGCGGTGGCGGCGGCGCGCGGCGGCGGCGGCAGCGGCTTTTTCGG 135
                                                                                                                                                                                                                                                                                                        98 CGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGT 157
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocal
                                                                                                                                                                                                                                                                                                                                                                                                                                           197;
                                                                                                                                                                                                                                                                                                                                                                                                                                    th 15.4%;
Similarity 49.6%;
97; Conservative
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6300 Columbia Center, 701 Fifth Avenue
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Pred. No. 3.8e-06;
0; Mismatches 200; Indels
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; LENGTH: 1931
; TYPE: DNA
; ORGANISM: EBNA
US-09-130-114-2
US-09-056-556-167

Sequence 167, Application US/09056556

Patent NO. 6350456

; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match 15.4%; Score 76.8; DB 2; Length 1931; Best Local Similarity 47.7%; Pred. No. 4.2e-06; Matches 225; Conservative 0; Mismatches 247; Indels 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Horlick, Robert A.
APPLICANT: Damaj, Bassam B.
APPLICANT: Damaj, Bassam B.
APPLICANT: Robbins, Alan K.
TITLE OF INVENTION: Eukaryotic Cells Stably Expressing Genes
TITLE OF INVENTION: From Multiple Transfected Episomes
FILE REFERENCE: 0867/1D93US1
CURRENT APPLICATION NUMBER: US/09/130,114
CURRENT FILING DATE: 1998-08-06
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                                                                                                                                                 316 GACGAGGACGGGGAGGACGAGGACGAGGACGAGGACGAGGACA 265
                                                                                                                                                                                           438 ATCGCCGAGGATGTCGCACAGGGCCATCGCCAACGAGGACGCCGCCCCAGGGCA 489
                                                                                                                                                                                                                               378 CAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGA 437
                                                                                                                                                                                                                                                                                                                      198 GCCAATGAGGACGCCAGCGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAAC 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            138 GGCATCGCCAACGAGGAGGTTGCCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATC 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            736 GACGGGGAGGACGAGGGACGGGGGAGGACGGGGAGGACGGGGGACGGG 677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     376 TGCCGAATCCGGGCTGACCATGGACAGCGCGGCCGAG 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              398 GGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAG 434
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78 ACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATCCAG 137
                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCAGGGCCATCGCCAACGGGGAC 317
                                                                                                                                                                                                                                                                                                                                                                GCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTC 377
                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
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Best Local Similarity 48.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (206) 682-6031 INFORMATION FOR SEQ ID NO:
                                                                                        1297
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LENGTH: 1439 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: MAKI, DAVIG J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/0
FILING DATE: 07-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Reed, Steven G.
APPLICANT: Skeiky, Yasii A.W.
APPLICANT: Dillon, Davin C.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR THE PREVENTION AND
NUMBER OF SEQUENCES: 241
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                 1237 GCGGCAACGGCTCCGCGGGCGGCGGCGGCGAGGGGCGGCGGCAGCGCCAACG 1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION: TELEPHONE: (206) 622-4900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
1357 GTGCCGCCAGCGGCTCAGGCGTCATCAACGTCACCGCCGGCCACGGCGGCAACGGCGGCA 1416
                                         199 CCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139 GCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCG 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   997 GCCTCAACGGCGGGGCGGTGCTGGCGGGGGCCGGCGAACGCGGGTGTCGCCGGCGTGT 1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            937 ACGCGAGCACGACCACCGGCAACGCCGGCTCCGGTGGTGCCGGCGGTAATGGGGGGCACTG 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82 CCCAGTGCATCGCCAACGAGGAAGCC---GCCCAGGGCATCGCCGAGGACGCCATCCAGG 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 6300 Colum
CITY: Seattle
STATE: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22 ACGCTGCCCAGGGCATCGCTAATGAGGACGCCCGACCAGGGCATCGCTAATGAGGACACCA 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE:
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                                                                                        GCGGCCACGGCGGCGGTGCCACCGGCGGCGACCGGCAAGGGCGGCAACGGCACCAGCG 1356
                                                                                                                                     AGGGCATCGCTAACGAGGTGGCCGCCCAGGGGCATCGCCAACGAGGACGCCGCCCCAGGGAA 438
                                                                                                                                                                                                                           CCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCC 378
                                                                                                                                                                                                                                                                          GCTCAGGCGTCGTCAACGTCACCGCCGGCCACGGCGCAACGGCGGCAATGGCGGCAACG 1236
                                                                                                                                                                                                                                                                                                                       GGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGGGCATCGCCAACGGGGACG 318
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; Pred. No. 5.3e-06;
0; Mismatches 243; Indels 3
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1417 A 1417

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RESULT 8
US-09-105-537-7

Sequence 7, Application US/09105537A

Patent No. 6265202
GENERAL INFORMATION:
APPLICANT: Sherman, D.H.
APPLICANT: Xue, Y.
APPLICANT: Xue, Y.
APPLICANT: Tale, Y.
APPLICANT: DAAO, L.
TITLE OF INVENTION: DNA encoding methymycin and pikromycin
FILE REFERENCE: 600.438U51
CURRENT APPLICATION NUMBER: US/09/105,537A
CURRENT APPLICATION HOMBER: US/09/105,537A
CURRENT FILING DATE: 1999-06-26
NUMBER OF SEQ ID NOS: 43
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 7
LENGTH: 1148
TYPE: DNA
RESULT 9
US-09-056-556-167/c
(Sequence 167, Application US/09056556
; Sequence 167, Application US/09056556
; Patent NO. 6350456
; Patent NO. 6350456
; PAPLICANT: Reed, Steven G.
; APPLICANT: Skelky, Yasir A.W.
; APPLICANT: Dillon, Davin C.
; PITLE OF INVENTION: COMPOUNDS AND METHODS FOR THE PREVENTION AND NUMBER OF SEQUENCES; 241
; CORRESPONDENCE ADDRESS:
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; TYPE: DNA
; ORGANISM: Streptomyces venezuelae
US-09-105-537-7
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Best Local Similarity 49.5
Matches 220; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                          476 CGCCGCCCAGGGCATCGCCAACAA 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          416 CAACGAGGACGCCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGA 475
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TREAT
; Sequence 3, Application US/09105537A patent No. 6265202 generat INFORMATION: ; APPLICANT: Sherman, D.H.
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                                                                                  RESULT 10
US-09-105-537-3/c
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INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 1439 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDEDNESS: single
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-- Tocal Similarity
Conserv
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ATTORNEY/AGENT INFORMATION:
NAME: MAKI, David J
REGISTRATION NUMBER: 21:
REGISTRATION NUMBER: 21:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 07-APR-19
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COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1233 TGCCGCCATTGCCGCCGTTGCCGCCGTGGCCGGTGACGTTGACGACGCCTGAGCCGC 1174
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                                                                                                                                                                                                                                                                                                                                                                                                                    993 TGCCCCCATTACCGCCGCCACCACCGGAGCCGGCGTTGCC 954
                                                                                                                                                                                                        428 CGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCC 467
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                                                                                                                                                                                                                                                                                                                                                                          308 CAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGA 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                        248 CTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCCCCAGGGCATCGC 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          188 ACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGG 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        128 CGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGC 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68 TAATGAGGACACCAGTGCATCGCCAACGAGGAAGCCCCCGAGGGCATCGCCGAGGA 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
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STREET: 6300 Columbia Center,
CITY: Seattle
STATE: Washington
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47.6%; Pred. No. 1.1e-05;
ative 0; Mismatches 241; Indels 0
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RESULT 11
US-09-177-349-2/c
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; ORGANISM: Streptomyces venezuelae
US-09-105-537-3
; TYPE: DNA
; ORGANISM: Mycobacterium tuberculosis
US-09-177-349-2
                                                                                                                                                                        TITLE OF INVENTION: iniA, iniA AND iniC GE
TITLE OF INVENTION: OF USE
FILE REFERENCE: 96700/491
CURRENT EXPLICATION NUMBER: US/09/177,349
CURRENT FILING DATE: 1998-10-23
NUMBER OF SEO ID NOS: 14
SOFTWARE: Patentin Ver. 2.0
SEO ID NO 2
SEO ID NO 2
SEO ID NO 2
SEO ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/09177349
Patent No. 6268201
GENERAL INFORMATION:
APPLICANT: Alland, David
APPLICANT: Bloom, Barry R.
APPLICANT: Bloom, Barry R.
APPLICANT: Jacobs Jr., William R.
APPLICANT: Jacobs Jr., William R.
APPLICANT: Jacobs Jr., William R.
APPLICANT: ACCORDING TO THE CONTROL OF THE OF THE OF THE CONTROL OF THE CONTROL
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LENGTH: 13613
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Best Local :
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APPLICANT: Xue, Y.
APPLICANT: Zhao, I.
APPLICANT: Zhao, I.
TITLE OF INVENTION: DNA encoding methymycin and pikromycin ETLE REFERENCE: 600.438USI:
CURRENT EPLICATION NUMBER: US/09/105,537A
CURRENT FILING DATE: 1998-06-26
NUMBER OF SEQ ID NOS: 43
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                                                                                               TYPE: DI
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       476 CGCCGCCCAGGGCATCGCCAACAA 499
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     356 CATCGCTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGC 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        296 CCAGGGCATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGG 355
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49.5%; Pred. No. 1.1e-05;
ative 0; Mismatches 221; Indels 3;
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; LENGTH: 5970
; TYPE: DNA
; ORGANISM: Streptomyces venezuelae
US-09-320-878-21
                                                                                                                                                                                                                                                                                                                                                               CORRENT APPLICATION NUMBER: US/09/320,878A
CURRENT FILING DATE: 1999-05-27
EARLIER APPLICATION NUMBER: CIP OF 09/141,908
EARLIER APPLICATION NUMBER: CIP OF 09/073,538
EARLIER FILING DATE: 1998-05-06
EARLIER APPLICATION NUMBER: CIP OF 08/846,247
EARLIER APPLICATION NUMBER: CIP OF 08/846,247
EARLIER FILING DATE: 1997-04-30
EARLIER APPLICATION NUMBER: 60/119,139
EARLIER APPLICATION NUMBER: 60/119,139
EARLIER APPLICATION NUMBER: 60/10,880
EARLIER FILING DATE: 1998-09-22
EARLIER FILING DATE: 1998-09-22
EARLIER FILING DATE: 1998-09-22
EARLIER FILING DATE: 1998-09-22
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; Sequence 21, Application US/09320878A

; Patent No. 6117659
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                                                                                                                                                                           EARLIER APPLICATION NUMBER: 60/
EARLIER FILING DATE: 1998-05-28
NUMBER OF SEQ ID NOS: 34
SOFTWARE: PATENTIN VET. 2.0
SEQ ID NO 21
LENGTH: 5970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match 14.8%; Score 74; DB 4; Length 5036; Best Local Similarity 48.2%; Pred. No. 1.3e-05; Matches 209; Conservative 0; Mismatches 225; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
Query Match 14.8%;
Best Local Similarity 49.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: ASHLEY, Gary
APPLICANT: BETLACH, Melanie C.
APPLICANT: BETLACH, Mary C.
APPLICANT: McDANIEL, Robert
APPLICANT: TANG, Li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: RECOMBINANT NARBONOLIDE POLYKETIDE SYNTHASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   875 CCGGCTGAGACACCGATCTGGCTAGCGATGCCCGCCTGGCCGCCGACACCAGCGCCGACA 816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             515 AGAGCCAGGCCACC 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        427 CCGCCCAGGGAATC 440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307 CCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACG 366
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   935 ACTGCGTTGCTGCTGACCCCGGTCAGGCCGCTGACATTGCCGACGCCGAGCCCACCA 876
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Score 74; DB 3; Length 5970; Pred. No. 1.3e-05;
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US-08-387-942C-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
              TELEFAX: 703-205-8050
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                               APPLICATION NUMBER: US/08/387
FILING DATE: 09-MAY-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: MURRHY IR GERALD M.
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 1809
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-205-8000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: VALLA, SYEIN

APPLICANT: SKJAK-BRAEK, GUDMUND

APPLICANT: LARSEN, BJORN

TITLE OF INVENTION: DNA COMPOUNDS COMPRISING SEQUENCES

TITLE OF INVENTION: ENCODING MANNURONAN C-5-EPIMERASE

NUMBER OF SEQUENCES: 52

CORRESPONDENCE ADDRESS:

ADDRESSE: BIRCH, STEWART, KOLASCH & BIRCH, LLP

STREET: P.O.BOX 747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.)
CURRENT APPLICATION DATA.
                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             132 CGACCGCCACGGCCTCAACAACCA 109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       416 CAACGAGGACGCCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGA 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372 CGCCGTCGTCACCGACGACGCCGACCTCGCCGCCCGGATCCGCGCCCTCCACAACTTCGG 313
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STATE:
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                                                                                                                                                                                                                                     UMBER: US/08/387,942C
09-MAY-1995
                                                                                                                                                                                                                                                                                                         Release #1.0, Version #1.30
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                                                                                                                                                                                                US-09-105-537-1
                                                                                                                                                                                                                      RESULT 14
                                                                               Sequence 1, Application US/09105537A Patent No. 6265202 GENERAL INFORMATION: APPLICANT: Sherman, D.H. APPLICANT: Liu, H.
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            APPLICANT: Liu, H.
APPLICANT: Xue, Y.
APPLICANT: Zhao, L.
APPLICANT: DNA, encoding methymycin and pikromycin
FILE REFERENCE: 600.438US1
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ORIGINAL SOURCE:
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6702..9695
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US-09-025-691-2
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; TYPE: DNA
; ORGANISM: Streptomyces venezuelae
US-09-105-537-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/09025691 Patent No. 6069299 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 1
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CURRENT FILING DATE: 1998-06-26
NUMBER OF SEQ ID NOS: 43
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                 CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: HARDAN, GATY E.
TITLE OF INVENTION: FUNGUS AND INSECT CONTROL WITH
TITLE OF INVENTION: CHITINOLYTIC ENZYMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4792 GGCCATGGGGGAGGAACTGCGCGCGCGCGCCACCCCGTGTTCGCCGCCGCCCTCGACACCGT 4851
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                                                                                                                                                                                                                                                             ADDRESSEE: Nixon, Hargrave, Devans & Doyle LLP STREET: Clinton Square, P.O. Box 1051 CITY: Rochester
                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68 TAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGA 127
CLASSIFICATION:
                         FILING DATE:
                                          APPLICATION NUMBER:
                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 CGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGC 67
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                                                                                                                                                                                                     14603
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                                                                                                                                                                                                                                                New York
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                                                                                                                                                                                                                       U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Broadway, Roxanne M.
                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14.68;
                                          us/09/025,691
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              score 73.2; DB 4; Length 15872;
Pred. No. 1.8e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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Search completed: October 10, Job time: 1097.73 secs

2002, 19:46:20

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: 1
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 19
TELECOMMUNICATION INFORMATION:
TELEPHONE: (716) 263-1304
TELEPAX: (716) 263-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 1294 base pair
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Goldman, Michael I
                                                                                                                                                               557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          317
668 CTTCGCCGACA 678
                                                                              608 CATCTCGGTCGGCGAGAAGGGCGCGGTCGCCGTCAACGACAGCGCCTCCGCCCAGCG 667
                                                                                                                                                                                                    368 GGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGC 427
                                                                                                                                                                                                                                                                                      308 CAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGA 367
                                                                                                                                                                                                                                                                                                                             437
                                                                                                                                                                                                                                                                                                                                                                                                         377 ACCGGCCCACGCGGTGACCGGTTACTGGCAGAACTTCAACAACGGCGCGACCGTGCAGAC 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128 CGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAAGGGCATCGCCAATGGGGTCGCCGC 187
                                       488 CATCGCCAACA 498
                                                                                                                   428 CGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCCCAGGG 487
                                                                                                                                                                                                                                              497 CAACGCGGGCGAGATCACCCTTCACCCTCGACTCGGCTCGGCCTCGGCGGCTACACCGACGA 556
                                                                                                                                                                                                                                                                                                                                                                  248 CTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGGCATCGC 307
                                                                                                                                                                                                                                                                                                                                                                                                                                              188 ACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGG 247
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
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30,727
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Result
No.
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database :
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
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   110 9 8 7 6 5 4
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 1153.4
1124.6
1118.6
1113.98.6
94.2
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73.4
73.4
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Match Length DB
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224.9
223.67
223.67
118.8
117.1
117.1
115.9
115.9
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114.7
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gb_htc:*
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BG724320
AI904151
BG847089
CNS04SGK
BE427000
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BE216934
AU176645
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AL041090
             AV438522
BG73944
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                                                  AL110383 DKFZp434E
AL041090 DKFZp434C
BIB2927 603079427
BI561135 603253662
BG724320 602697968
AI904151 CM-BT043-
BG847089 102401540
AL305165 Tetraodon
BE427000 PSR6561 I
BG417341 HYSMEK001
BE216934 EST0477 T
AU176645 AU176645
AL193990 Tetraodon
AL254315 Tetraodon
AV438522 AV438522
BG739444 EMI_81_A0
BG773077 602721380
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## ALIGNMENTS

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REFERENCE
AUTHORS
TITLE
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VERSION
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AL110383
   BASE COUNT
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ORGANISM
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                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                           Am Klopferspitz 18a D-82152 Martinsied, Germany
This is the 5 sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2); Email s.wiemann@dkfz-heidelberg.de;
sequenced by LMU (Ludwig Maximilians University,
Munich/Germany) within the cDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                     No s1 sequence available. This clone (DKFZp434E0731) is available at the RZPD in Berlin. Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059 Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Blum,H., Bauersachs,S., Mewes,H.W., Gassenhuber,J. and Wiemann,S. EST (Blum, et al.)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AL110383

DKFZp434E0731_r1 434 (synonym: h
DKFZp434E0731 5', mRNA sequence.
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Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 697)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Blum H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
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217 a
                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone=NbFEp043B0731"
/clone_11b="434 (synonym: htes3)"
/tissue_type="test1s"
/dev_stage="adult"
/dev_stage="adult"
/lab_host="BH0B"
/note="Vector: pSport1; Site_1: Not1; Site_2: Sall"
181 c    180 g    119 t
                                                                                                                                                                                                                                    Location/Qualifiers
1. .697
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RESULT 2
AL041090
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ORIGIN
                   BASE COUNT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       170 CGCCAATGGGGTCGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAA 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCCGCCAGGGCATCGCCAACGGGACGCCACCAAGGGCATGGGGCAACGAGGTCACCAT 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTGGACGCTGTACACGACATTGCTAATGAG 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCACCAATGAGGGGGGTTTATACGACATTGCTAATGGCACCGACAAGG--CACGCTAA 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCGCCAACGAGGACGCCCCCCCCGGGGAATCGCCGAGGATGTCGCCACAGGGCATCGCCAA 469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACAAGCCGTCGCTAACAAGTACACTGTACACAACATCGCTAATGAGGGCACTGTACAAGA 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCACGGCATCGCTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGG 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCCGCCCACGCATCGCCAACG----AGCTGTATACGACATCGCTAACGAGGACACCCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL041090

DKFZp434C1116_rl 434 (synonym: h

DKFZp434C1116 5', mRNA sequence.
                                                                                                                                                                                                            Berlin-Charlottenburg, GERMAN Location/Qualifiers
                                                                                                                                                                                                                                                           No s1 sequence available.
This clone (DKFZp434C1116) is available at the RZPD in Berlin.
Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
                                                                                                                                                                                                                                                                                                                                          Am Klopferspitz 18a D-82152 Martinsried, Germany
This is the 5 sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2); Email s.wiemann@dkfz heidelberg.de;
sequenced by BMFZ (Blomedical Research Center at the Charite,
Berlin/Germany) within the cDNA sequencing consortium of the German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Koehrer, K., Beyer, A., Mewes, H.W., Gassenhuber, J. and Wiemann, S. EST (Koehrer, et al.)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catariata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarihin; Hominidae; Homo. 1 (bases 1 to 179)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Koehrer K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
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                                                                                                                                                                                                                                                                                                                                   Project.
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/note="Vector: pSport1; Site_1: Not1; Site_2: Sall"
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                               GERMANY; Email: clone@rzpd.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 179 bp mRNA linear EST 29-FEB-2000
nonym: htes3) Homo sapiens cDNA clone
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Best Local Similarity 82.1%;
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                                                                                                                                                                    122 CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182 CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 387 GCTAACGAGGTGGCCCCAGGGCATCGCCAACGAGGACGCCCAGGGAAT 439
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                                                                               8 CGAGGACGCTGTATACGACATCGCTAATGAGGACGTTGTATATGACATCGCTAATGAGGA 67
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 758)
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BI829297
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                                                                                                                                                                                                                                                                                            Similarity
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/db_xef="taxon:9606"
/clone="INAGE:5170950"
/clone_lib="NIH_MGC.119"
/tissue_type="medulla"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                      cloning). Average insert size 1.3 kb insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NHLMGC Library."

159 c 167 g 217 t
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                                                                                                                                                                                                                                                                                       23.7%;
                                                                                                                                                                                                                                               Score 118.6; DB 10; Length Pred. No. 1.9e-07; 0; Mismatches 119; Indels
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                                                                                              Query Match
Best Local
                                                                         Matches 163; Conservative
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199 CCAATGAGGACGCCACCCAGGGCATCGGCAACTGGGACGCCGTCCACGGCTTCGCCAACG 258
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        422 GGACGCCGC 430
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               362 TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             188 CATCGCTAATGAGGACGCTGTATATGGCATCGCTAATGAGGATGCTGTATACGAATTCGC 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302 CATCGCCAACGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128 ATATGACATCACTAATGAGGACGCTCTATACGACATCACTAATGAGGACGCTGTATACAA 187
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Miklos Pakkovits, M.D., Ph.D.
CDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI561135 673 bp mkNA linear EST V3-SGF 4 603253662F1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:5296262 5',
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC http://mgc.nci.nlh.gov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
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Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 673)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11749 row: k column: 15
                                                                                              Similarity
                                                                                                                                                                               /note-"Organ: testis; Vector: pBluescriptR (modified pBluescript K6+); Site_1: BamHI; Site_2: Sall-NhOI (gtcg; pBluescript K6+); Site_1: BamHI; Site_2: Sall-NhOI (gtcg; pBluescript K6+); Site_2: Sall-NhOI (gtcg; pBluescript K6+); Site selected for average insert size 2.2 kb and normalized to ROT 5. This is a primary library enriched for full-length clones and constructed using the cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/MHGRI, National Institutes of Health). Note: this is a NIH_MGC Library." a 185 c 185 g 131 t
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/db_xref="taxon:9606"
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/clone_lib="NIH_MGC_97"
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                                                                                              22.6%;
71.2%;
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                                                                                            Score 113;
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1.1e-06;
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                                                                                                                                                                                          Conservative
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/clone_lib="NIH_MGC_97"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                             19.78;
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622 CGGCTTCGCTGATGAGGGACGCCAGCCAAGGCATCGCTAACAGGGACGC 670
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76 CATCGCCAAAGAGGCCGCCGCCCACGGCATCGCCAACGA-GCTGTATACGACATCGCTAA 134
                                                                                                                                                             29 CCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCACCCAGTG 88
                                                          89 CATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATCCAGGGCATCGCCAA 148
                                                                                                                             18 CCCAGGCATCGCCAACGAGGACGCCCCA-GGCATCGCCAACGAGGACGCCGCCCAG-G 75
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602697968E1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:4829993 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-remail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
CINA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
CONA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
CONA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
CONA Sequencing by: Incyte Genomics, Inc.
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      found through the I.M.A.G.E. Consortium/LLNL at: http://image.llni.gov
plate: LLAM10750 row: g column: 18
High quality sequence stop: 580.
Location/Qualifiers
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National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                        Institutes of Health). Note: this is a NIH_MGC Library.

a 147 c 151 g 101 t
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     Best Local Similarity Matches 147; Conserv
                                                           Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   269 CCTCAGCTTCGCCAACGGGGACGCCGCCCAGGGCATCGCCAACGGGGACGCCACCAAGGG 328
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL
Project. This entry can be seen in the following URL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 241)

Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, M. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tel: +55-11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rus Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AI904151 241 bp mRNA linear EST JU-
CM-BT043-090299-075 BT043 Homo sapiens cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seq primer:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (http://www.ludwig.org.br/seq/gethtml.pl?tl=CMst2=CM-BT043-075.html
st3=090299st4=1)
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           Conservative
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                                                                                                                             'dev_stage="Adult"

/dev_Stage="Adult"
/note="Organ: breast; Vector: puc18; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196 . Judwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."

8 tringency conditions."
                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="BT043"
/sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:9606"
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                          18.8%;
     0;
                          Pred. No. 0.00038;
     Mismatches
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 187 GCTGTATATGGCATCGCTAATGAGGATGCTGTATACGAATTCGCTAATAAGGATG 241
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                       16 CTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGG 75
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                                                                             240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chlamydomonas reinhardtii.
Chlamydomonas reinhardtii
Bukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG847089 780 bp mRNA lin 1024015H06.y2 C. reinhardtii CC-1690, normaliz Chlamydomonas reinhardtii cDNA, mRNA sequence. BG847089 BG847089.1 GI:14228273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Charles Hauser
DCMB Box 91000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Grossman,A., Davies,J., Federspiel,N., Harris,E., Lefebvre,P., McDermott,J.P., Silflow,C., Stern,D. and Surzycki,R. Analyses of the Chlamydomonas reinhardtii Genome: A Model, Unicellular System for Analyzing Gene Function and Regulation in Vascular Plants; project phase 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: chauser@duke.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chlamydomonadaceae; Chlamydomonas
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Fax: 919 613 8177
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                                                                                                                                                                                                             208
                                                                             Conservative
                                                                                                                                                                                                                         /note="vector: pBluescript II SK-; Site_1: EcoRI; Site_2: XhoI; This library, constructed by John Davies and Jeffrey XhoI; This library, constructed by John Davies and Jeffrey McDermott, combines cDNAs from CC-1690 cells grown to mid-log phase in TAP (acetate-containing) medium in the light, TAP medium in the dark, HS (minimal) medium in n ambient levels of CO2 and HS medium bubbled with 5% CO2. POJYA mRNA was purified from each sample, pooled and cDNA synthesized. The cDNA was directionally cloned into Lambda ZAP II (Stratagene) in the EcoRI (5') and XhoI (3') sites. pBluescript II SK- plasmids were excised from the lambda ZAP clones by superinfection with Exassist (Stratagene) phage. The library was normalized using method 4 described in Bonaldo et al (1996) Genome Research 6: 791-806."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Chlamydomonas reinhardtii"
/strain="CC-1690 wiid type mt+ 21gr"
/db_xref="taxon:3055"
/clone_lib="C. reinhardtii CC-1690, normalized, Lambda Zap
II"
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                                                                                                  17.1%;
50.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GSS; genome survey sequence.
Tetraodon nigroviridis.
Tetraodon nigroviridis
Tetraodon nigroviridis
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostei; Neoteleostei;
Actinopterygii, Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Charaterization and repeat analysis of the compact genome of the freshwater pufferfish Tetraodon nigroviridis Unpublished 2 (bases 1 to 822)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               were truitius, H., Jaillon, O., Dasilva, C., Fizames, C., Fisher, C. Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A. and Weissenbach, J.
                                                                                                                                Submitted (12-APR-2000) to the EMBI/GenBank/DDBJ databases This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis genome. For more information, please take a look at http://www.genoscope.cns.fr/Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                         Human gene number estimate provided by genome wide analysis using Tetraodon nigroviridis DNA sequence
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Bernot,A., Fizame
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Roest-Crollius, H., Jaillon
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007M14 of library H from Tetraodon
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      /clone="007M14"
                            /organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
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aodon nigroviridis, genomic survey
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                256 GTCAGGCTAAGGTGATGCTAACCCGGAGTCAGGCTAAGTCGACGCTAACCCGGAGTCAGG 197
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Triticum asstivum
Eukaryota; Viridiplantae: Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooidea
; Triticeae; Triticum.
                                                                                                                                                                                                         Anderson, O. A., Appels, R., Bailey, P., Blake, T., Close, T., Cloutier, S., Dubcovsky, J., Feuillet, C., Gale, M., Graner, A., Gustafson, P., Herrmann, R.G., Holton, T., Jacquemin, J.M., Jia, J., Joudrier, P., Langridge, P., Lazo, G.R., Lin, J.J., McGuire, P., Ogihara, Y., Pecchioni, N., Qualset, C., Schuch, W., Selvaraj, G., Shariflou, M., Sorrells, M., Warburton, M. and Wenzel, G., Schuch, T., Expressed Sequence Tags for Species of the Triticeae
Unpublished (2000)
Contact: Bailey P
Cereals Group, John Innes Centre
Norfolk, Norwich NR4 70H UNITED KINGDOM
Tel: 44 1603 452571 ext. 2587
Fax: 44 1603 502241
Email: paul bailey@bbsrc.ac.uk
International Triticeae EST Cooperative (ITEC)
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/note="Genoscope sequence ID : COBH007BG07XE1-end
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                                                                                                                                                                                                                                                                                                                                               DEFINITION
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                                                     AUTHORS
                                                                                                                                                                       ORGANISM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               537 ----CAAGGGCANCAACCAGCACAAGGGCAACAAGGTCAGCAGCAGCACAAGGNCAACA 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         593 AG 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               439 TCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCCCAGGGCCATCGCCAACA 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               478 AGCACAAGGGCAACAAGGTCAGCAGCTAGGACAAGGGCAACAAGGTCAGCAGCCAGTGA-536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           418 GCAACTAGCACAAGGGCAACAAGGGCAGCAGCACCAAGTGCAACAAGGGCAGCAGCC 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           319 CCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCC 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358 GCCAGGACAAGGGCAGCAACCAGGACAATTGCAACAACCAGCACAAGGGCAACAAGGGCA 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                139 GCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCG 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124 AGGTCAACAGCCAGGGCAAGGGCAACAAGGTCAGCCAGGACAAGGGCAACAAGGTCA 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    298 AACTTCTCCGTTGCAGCCAGGACAAGGGCAACCAGGGTACGACCCAACTTCTCCGCAACA 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19 AGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACA 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79 CCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCATCCAGG 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGGCATCGCCAACGGGGACG 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACAAGGGCAACAGCCAGGACAATGGCAACAACCAGGACAAGGGCAACCAGGATACTACCC 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAACCGGGGCAAGGCCAGGGTACTACCCAACTTCTC-----CGCAGCAATCAGG 237
                                                                                                                                                                                                                                                                                                        BG417341 884 bp mRNA linear EST 23-OCT-2001
HVSMEK0017J12f Hordeum vulgare testa/pericarp EST library
HVCDNA0013 (normal) Hordeum vulgare cDNA cione HVSMEK0017J12f, mRNA
1 (bases 1 to 884)
Wing,R., Close,T.J., Kleinhofs,A., Wise,R., Kannangara,G., von
Wetstein,D., Akhunov,E., Chin,A., Choi,D.W., Fenton,R.D., Kianian
,P., Otto,C., Simons,K., Zhang,D., Begum,D., Frisch,D., Yu,Y.,
                                                                                         Hordeum vulgare
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldeae
; Triticeae; Hordeum.
                                                                                                                                                                                                                                             BG417341.2
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 50.8
45; Conservative
                                                                        (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /Organism-"Triticum aestivum"
/Cultivar-"Soleil"
/db_xref="faxon:4565"
/dlone="p986561"
/Clone="p986561"
/Clone="IPPE PSR Wheat Endosperm Library"
/tissue_type-"endosperm"
/tissue_type-"endosperm"
/dev_stage="1:1 mix 10:20 days post anthesis"
/note-"vector: Lamdad ZAP II (Stratagene)"
185 c 180 g 45 t 4 others
                                                                                                                                                                                                                                             GI:16333154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15.9%;
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Pred. No. 0.031;
- ""smatches 226; Indels 11; Gaps
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                                                                     195 ATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTTCCACGGCTTCGCC 254
                                                                                                                                                                  135 CAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGC 194
                                                                                                                                                                                                                 177 GTCACCATCCCGGTCATGGCCAAGGCCCGCATCGGGCCATCGTCGACGCCCAGATCCTC 236
                                                                                                                                                                                                                                                                                                                 288 GACGACGCCCACCACCATCAACAAGCACAACTTCCGCGTCCCCTTCGTCTGCGGCTGCCGC
                                                                                                                     237 GAGTCCATCGGCGTCGACTACGTGGACGAGAGC-----GAGGTCCTCACACTCGCC
                                                                                                                                                                                                                                           75 GACACCACCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCCAGGACGACGCCATC 134
                                                                                                                                                                                                                                                                                                                                                                15 GCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAG 74
                                                                                                                                                                                                                                                                                                                                                                                                                226;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tel: 864 656 7288
Fax: 864 656 4293
Email: rwing@clemson.edu
Total hg bases = 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clemson University Genomics Institute
Clemson University
100 Jordan Hall, Clemson, SC 29634, USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           primer: AATTAACCCTCACTAAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="testa/pericarp"
/lab_host="TJC121"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="HVSMEk0017J12f"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:4513"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Hordeum vulgare"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                              15.8%;
                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches 213; Indels
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Henry, D., Palmer, M., Rambo, T., Simmons, J., Oates, R. and Main, D. Development of a genetically and physically anchored EST resource for barley genomics: Morex testa/pericarp cDNA library Unpublished (2001)
On Mar 13, 2001 this sequence version replaced gi:13322988.
                                                                                                                                                                                                                California, Riverside (Akhunov, Chin, Choi, Close, Fenton, Kianian, Otto, Simons, Rhang), Phagemids were plated and picked at the Clemson University Genomics Institute (CUSI) (Begum, Palmer, Frisch, Atkins and Wing). Plasmid DNA preparations, DNA sequencing and sequence analysis were performed at CUGI (Wing, Yu, Frisch, Henry, Simons, Oates, Rambo, Main). The sequence has been trimmed to remove vector sequence and contains a minimum of 100 bases of phred value 20 or above. For more details on library preparation and sequence analysis see http://www.genome.clemson.edu/projects/barley. To order this clone see http://www.genome.clemson.edu/projects/barley. To order this clone see http://www.genome.clemson.edu/projects/barley. See Close TJ, Wing R, Kleinboffs A, Wise R (2001) Genetically and physically anchored EST resources for barley genomics. Barley Genetics Newsletter 31:29-30. (http://wheat.pw.usda.gov/gepages/bgn/31/cover.html) " 44 a 319 c 273 g 146 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             plants were raised from seeds in a Controlled Environments growth chamber maintained in continuous light at 180C, and testa and pericarp were dissected from developing kernels at Washington State University, Pullman, WA (Kannangara, von Wetstein). Total RNA was prepared, poly(A) RNA was purified, one cDNA library was made, and 1 million pfu were in vivo excised to give pBluescript SK(-) cDNA phagemids in the TJ Close lab at the University of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib~"Hordeum vulgare testa/pericarp EST library
HVcDNA0013 (normal)"
                                              Score 79.2; DB 10; Length 884; Pred. No. 0.034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lambdaZAP; Site_1: EcoR1; Site_2: Xho1;
Gaps
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RESULT 11
BE216934
LOCUS
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AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 468 GTCCGTGCCCTCCGCAGCATGGACGACGACGAGGTATTCTCCTATGCCAAGAGCATTGCC 527
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                                                                                                                                                                                                                                             141 GCCTATATCCGCGCCCAGGGCGGCGTCGCCCGCATGTCCCGACCCGGGCCTCATCCGCGAA 200
183 GCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTC 242
                                               261 GCCCAGATCCTCGAGTCCATCGGCGTCGACTACGTGGACGAGAGC------GAGGTC 311
                                                                                            123 GAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTC 182
                                                                                                                                              201 ATCAAGCGCGCCGTCACCCATCCCAGTCATGGCCAAGGCCCGCATCGGGCACTTCGTCGAG 260
                                                                                                                                                                                             63 ATCGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCC 122
                                                                                                                                                                                                                                                                         3 GTCTACGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGC 62
                                                                                                                                                                                                                                                                                                                                                                       Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGGCCGGCACCGGCAATGTCGTCGAGGCCGTCCGCCACGTCCGCTCCGTCATGGGCGAC
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                                                                                                                                                                                                                                                                                                                                              230;
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EST04477 Triticum aestivum Lambda Zap Triticum aestivum cDNA clone
JA1_5B_H05_T3 5', mRNA sequence.
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Crop Production & Pest Control Research Unit
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Analysis of an EST database reveals a probable CF2 resistance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldeae
; Triticeae; Triticum.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (2000)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seq primer: T3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             janderson@purdue.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:4565"
/clone="JA1_5B_H05_T3"
/clone_lib="Trit.cum aestivum Lambda Zap"
/tissue_type="leaf"
/dev_stage="9 day old seedlings"
/dev_stage="9 day old seedlings"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Triticum aestivum"
/strain="P29"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              wheat
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                                                                                                                                                                                                                                                                                                                                                                  Score 78.4; DB 9; Length 990; Pred. No. 0.043;
                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                            221; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         423 GACGCCGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCA 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      492 GTCATGGGCGACGTGCCTGCCCTCCGCAGCATGGACGACGACGAGGTATTCACCTATGCC 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372 TGCGGCTGCCGCAACCTGGGCGAGGCCCTCCGCCGCATCCGCGAGGGCGCCGCCATGATC 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312 CTCACGCTCGCCGACGACGCCCACCACCACCAACAACAACAACTTCCGCGTCCCCTTCGTC 371
                                                                                                                          119 CCAGACTGTGGCCGACGCCAGCAACCAGACTGTGGCCGACGCCGCCAGCAACCAGAC 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        363 AACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAG 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303 ATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCT 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      243 CACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGGC 302
                      179 TGTGGCCGACGCCGCCAGCAACCAGACTGTGGCCGACGCCGCCAGCAACCAGACTGTGGC
                                                                     89 CATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGC---CATCCAGGGCATCGC 145
                                                                                                                                                                          29 CCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCACCCAGTG 88
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Oryzias latipes
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Teleostei; Euteleostei; Neoteleostei
Actinopterygii; Neopterygii; Percomorpha; Atherinomorpha;
Beioniformes; Adrianichthyldae; Oryzianae; Oryzias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Kiyoshi Naruse
Department of Biological Sciences
Graduate School of Science, University of Tokyo
Hongo 7-3-1, Bunkyo-ku, Tokyo 113-0033, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AU176645 GO2 bp mRNA linear EST 21-MAR-1
AU176645 Sugano-Kawakami 5' end enriched colh library (OLA) from
HNI Oryzias latipes cDNA clone OLa14.06c similar to pir|5288264|
bydroxyproline-rich glycoprotein - maize, mRNA sequence.
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EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: naruse@biol.s.u-tokyo.ac.jp
This clone was isolated from Sugano-Kawakami 5' end enriched cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Naruse,K., Mitani,H. and Tanaka,M.
Medaka EST Project in University of Tokyo (2001)
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                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:8090"
/clone="0La14.06c"
/clone=10="Sugano-Kawakami 5' end enriched cDNA library
/clone_lib="Sugano-Kawakami 5' end enriched cDNA library
(OLA) from HNI"
                                                                                                                                                                                                                                                                                                                                         /tissue_type="whole body"
/dev_stage="adult"
246 c 175 g 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Oryzias latipes"
/strain="HNI"
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Pred. No. 0.078;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       386 CGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCCAGGGAATCGCCGA 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      359 CAACCAGACTGTGGCCGACGCCGCCAGCAACCAGACTGTGGCCGACGCCGCCAGCAACCA 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              146 CAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCGCCAATGA 205
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                                                                                                                                                                                                                               Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases
This sequence is a single read and was generated as part of a large
scale clone-end sequencing project of the Tetraodon nigroviridis
genome. For more information, please take a look at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tetraodon nigroviridis
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
                                                                                                                                                                                                                http://www.genoscope.cns.fr/Tetraodon.
                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                  Human gene number estimate provided by genome wide analysis using Tetraodon nigroviridis DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                       2 (bases 1 to 681)
Roest-Crollius, H., Jaillon, O., Dasilva, C., Bouneau, L., Fisher, C.,
Bernot, A., Fizames, C., Wincker, P., Brottier, P., Quetier, F.,
Saurin, W. and Weissenbach, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Charaterization and repeat analysis of the compact genome of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Roest-Crollius, H., Jaillon, O., Dasilva, C., Fizames, C., Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSS; genome survey sequence. Tetraodon nigroviridis.
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                                                                                                                                                                                                                                                                                                             Direct Submission
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                                /organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
/clone="262H14"
                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                             .681
    15.0%;
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  Score 74.8;
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  DB 12;
Length 681;
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                                                                                                                                                                                        Genoscope
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                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                              Tetraodon nigroviridis DNA sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tetraodontidae;
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  /organism="Tetraodon nigroviridis"
/db_xref="taxon:99883"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tetraodon.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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112 CAACAAAAACAACRACAACRACRGCRGCAACAACAACAAAAAACAACRACAACGGCAACAA 53
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   412 TTYTGTCDACRACAACAACAACAAAAAACRACWACTACAACAAAWACAACAACGGCGG 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           254 CAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCCCAGGGCATCGCCAACGG 313
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74 GGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGCCGAGGACGCCAT 133
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Location/Qualifiers
1. 915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 915)
Roest-Crollius,H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C.,
Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetler,F.,
Saurin,W. and Weissenbach,J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Charaterization and repeat analysis of the compact genome of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopteryqil; Neopteryqil; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopteryqii; Percomorpha; Tetraodontiformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tetraodon nigroviridis genome survey sequence PUC-Ori end of clud4F19 of library G from Tetraodon nigroviridis, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    freshwater pufferfish Tetraodon nigroviridis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene number estimate provided by genome wide analysis using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dasilva, C., Fizames, C.,
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sequence PUC-Ori
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RESULT 15
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                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
  Query Match
                                                                                                                                                                                                         source
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Local Similarity 54.9%;
ses 168; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGATGACGACAACGGCAACGACAACAACAACAACAACAACAATGACAACGACGACGACAA 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AV438522 AV3B522 Porphyra yezoensis TU-1 Porphyra yezoensis cDNA clone PS037d03_r 5', mRNA sequence.

AV438522
                                                                                                                                                                                                                                                                                                                                                     Generation of 10,154 expressed sequence tags from a leafy gametophyte of a marine red alga, Porphyra yezoensis DNA Res. 7, 223-227 (2000)
                                                                                                                                                                                                                                                                            The First Laboratory for Plant Gene Research Kazusa DNA Research Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Porphyra yezoensis. Porphyra yezoensis
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                                                                                                                                                                                                                                                                                                                  Contact: Erika Asamizu
                                                                                                                                                                                                                                                                                                                                         20363100
                                                                                                                                                                                                                                                                                                                                                                                                                Tabata,S
                                                                                                                                                                                                                                                                                                                                                                                                                            Nikaido, I., Asamizu, E., Nakajima, M., Nakamura, Y., Saga, N. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Rhodophyta; Bangiophyceae; Bangiales; Bangiaceae;
                                                                                                                                                                                                                                         Yana 1532–3, Kisarazu, Chiba 292–0812, Japan
£mail: asamizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 401)
                                                          37
                                                        ø
                                                                                       /organism="Porphyra yezoensis"
/strain="TU-1"
/db_xref="taxon:2788"
/clone="P$037d03 r"
/clone_lib="Porphyra yezoensis TU-1"
/note="Vector: pBluescriptII SK-; Sit
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/clone_iib="G"
/note="Genoscope sequence ID : C0BG044CC10SP1-end :
PUC-Ori"
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                                                                                                                                                                                                                         ocation/Qualifiers
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    14.78;
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    Score 73.4; DB 9;
                                                      124 g
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Length 401;
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Best Local Similarity 51.8 Matches 192; Conservative
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                                                                                                                                                                                                                                                                                                                                   192 GGGCACGTACGGCACGGGAGTGGGCGACGCACGTGGGCACCGGCGTGGGCGA 133
                                                                                                                                                                                                                                                                                                                                                                                               299
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                                                    479 CGCCCAGGGCA 489
                                                                                                                                                              419 CGAGGACGCCGCCCAGGGAATCGCCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGC 478
                                                                                                                                                                                                                      132 CGCGGTCGCCGGCGCGCGTGGGCGACGCGGTCGGGACGTACGGCACCGGCGTCGGCGA 73
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12 CGCGGTGGGAA 2
                                                                                                             CGCTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAA 418
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+ ive 0; Mismatches
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Search completed: October 10, Job time: 701.733 secs

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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0% Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
       307.8
302.4
269.6
257.6
257.6
257.6
257.6
                                                                                                                                                                                                                                                                                                                                      Score
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500
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       100.0
61.6
60.5
53.9
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51.5
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1: /SIDS1/gcgdata/1
2: /SIDS1/gcgdata/1
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                                                                                                                                                                                                                                                                                                                                      Match Length DB
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2. \SIDSI\gcgdata\hold-geneseq\geneseqn-embl\NA1980.DAT: *
2. \SIDSI\gcgdata\hold-geneseq\geneseqn-embl\NA1981.DAT: *
3. \SIDSI\gcgdata\hold-geneseq\geneseqn-embl\NA1983.DAT: *
3. \SIDSI\gcgdata\hold-geneseq\geneseqn-embl\NA1983.DAT: *
4. \SIDSI\gcgdata\hold-geneseq\geneseqn-embl\NA1983.DAT: *
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   ABA33930
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DNA encoding novel
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   RESULT 1
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foetal liver	Human	ABA61896	22	526		w	45
#8606	Probe	39	22	526		40.	44
bone m	Human	AAK34197	22	526		40.	43
brain e	Human	AAK08319	22	526		40.	42
foetal liv	Human	ABA60045	22	526		40.	41
#3704	Probe	AAI13771	22	459		40.	40
breast cell	Humar	ABA45009	22	459	•	40.	39
#14318 for g	Probe	AAI24385	22	471		142.4	38
#14922 for	Probe	ABA36456	22	471		42.	37
ncodi	. DNA	AAS76376	23	3127		45.	36
#21755 used	Probe	AAI53069	22	471		53,	35
bone	Human	AAK47234	22	471		53.	34
brain e	Human	AAK21080	22	471		53,	ω ω
foetal		ABA72651	22	471		53,	32
#5139 f	Probe	AAI15206	22	468		69.	31
#5050 f		ABA26584	22	σ'n.	•	69,	30
#8675		AAI39989	22	œ		171	29
bone marrow	Human	AAK34267	22	œ		171	28
brain expres	Human	AAK08387	22	œ	•	171	27
foetal liver		ABA60111	22	œ		17	26
	Probe	AAI41410	22	ø		œ	25
bone marrow	Human	AAK35695	22	ø		,	24
expre	Human	AAK09801	22	9		æ,	23
•	Probe	AA122991	22	576	•	178.2	22
ſΤ	Human	ABA50147	22	7	•	œ	21
#23134 used		AAI54448	22	ü	•	8	20
#14376		AAI24443	22	ω	•	φ,	19
bone marrow	Human	AAK48620	22	w			18
brain expres	Human	AAK22452	22	w	•	ω,	17
secreted pro	Human	AAA16669	21	w	•		16
#2635 used t	Probe	AAI33949	22	ø		235	15
Þ	Human	AAK02583	22	ø		235	14
m	Probe	ABA24056	22	ø	•	235	13
	Human	ABA54299	22	9		235	12
	DNA	AAS72321	23	3522	50.0	250	11
encoding novel	DNA	AAS72676	23	ω.	•	250	10

## ALIGNMENTS

AAD11123 standard; DNA; 748 BP

24-SEP-2001 (first entry)

Human small cell lung cancer associated gene, DKFZp434Cl96 #2.

Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA: melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; synovial sarcoma; cytostatic; ds.

19-JAN-2001; 2001WO-US02015.

(LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CANCER RES. (CORR ) CORNELL RES FOUND INC.

Stockert E, Scanlan MJ, Jager D, Old LJ, Gure AO, Chen Y;

WPI; 2001-457597/49

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                Human small cell lung cancer associated gene, DKFZp434C196 #1.
                                                                                                             AAD11122 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by an isolated nucleic acid comprising an NA Group 3 or 4 molecule -
                                                24-SEP-2001
                                                                              AAD11122;
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                                                (first entry)
                                                                                                             DNA; 1201 BP
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(SLOK ) SLOAN KETTERING INST C
(CORR ) CORNELL RES FOUND INC.
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                                 GCATCGCCAACGGGGACGCCAACGAGGCATGGGCAACGAGGTCACCATCCACGGCATCG
                                                            GCATCGCCAACGGGGACGCCAACGAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCG
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The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in pattents afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group I molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is human DKF2P434C196 DNA. This small cell lung cancer associated gene is designated as NY-SCLC-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoisolated nucleic acid comprising an NA Group 3 or 4 molecules.
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                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1201 BP; 255 A; 377 C; 349 G; 178 T; 42 other;
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u 100.0%; Score 500; DB 22; Similarity 100.0%; pred. No. 1.3e-67; D; Conservative 0; Mismatcher
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                                                                                                    The invention relates to isolated polynucleotide (I) and complying polypeptide (II) sequences. (I) is useful as hybridisation probes, and separase chain reaction (PCR) primers, oligomers, and for chromosome complying and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags complying expressed genes. (I) is useful in gene therapy techniques complying expressed genes. (I) is useful in gene therapy techniques complying expressed genes. (I) is useful in gene therapy techniques complying expressed genes. (I) or to treat disease states involving complying expressed genes. (I) and the sequence and as a food supplement. (II) and its binding partners are useful in medical company of sites expressing (II). (I) and (II) are useful for treating complying of sites expressing (II). (I) and (II) are useful for treating complying its protein expression or biological activity. The polypeptide and polynuclectide sequences have applications in compositive for genetic disorders or other treats to assess biodiversity cand to produce other types of data and products dependent on DNA and complete coding sequences of the invention.

Complete the sequence data for this patent did not appear in the printed content for the products and the confidence of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity
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23-AUG-2000; 2000US-0649167.
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food supplement; medical imaging; diagnostic; genetic disorder; ss.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAS72677;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID No 8481; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; ABG08490.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200175067-A2
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Sequence 1593 BP; 444 A; 429 C; 434 G; 286 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 CCCAGGGCATCGCCAACAAG 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361 CTAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCCAGGGCCAGGGCATCGCCAACG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCAGGGCATCGCCAACAAG 500
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tang YT;
RESULT 4
AAS72678
ID AAS7
XX AAS7
AC AAS7
XX AS7
AC AAS7
XX Hun
XX Hun
KW Hun
KW Hoc
XX Hoi
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                                             P-PSDB; ABG08491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1053
                                                                                                                                                               Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                 31-MAR-2000; 2000US-0540217
23-AUG-2000; 2000US-0649167
                                                                                                                                                                                                                                                                                                                                                                                                                                       30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                  WPI; 2001-639362/73
                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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78.8%;
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1352 ACACGACATCGCTAATGAG 1370
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1113 CCACGGGATCGCCAAGGAGGACGCCGCCCAGGGCATCGCCAACGAGGACGCCGTCCACGG 1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA encoding novel human diagnostic protein #8482.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAS72678 standard; cDNA; 3093 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1233 TAACGAGGATGCCGTGCACGGCATCGCTAATGAGGACTCCGTATACGACATCGCTAATGA 1292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1173 CATCGCCAACGAGGACGCCACCCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGC 1232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            422 GGACGCCGCCCAGGGAATCGCCGAGGAGTGTCGCACAGGGCATCGCCAACGAGGACGCCGC 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        993 CGAGGATGCCGCCCAGGGCATCGCCAACGAGGTCGCCGCCCAGGGCATCGCCAACGAGGA 1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              873 CGACATCGCTAACGAGATACTGTCCACGGCATCGCTAACGAGGCCGCCGACAAGGCCAT 932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    482 CCAGGCCATCGCCAACAAG 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362 TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302 CATCGCCAACGGGGACGCCAACGAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242 CCACGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGG 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65 CGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC--- 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 CTACGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCAT 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCCGCCCAGGGCATCGCCAACGAGGACGCCCGCCCAGGGCATCGCCAAGGACGCCGCC 1112
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Tang YT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
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RESULT 5
AAS72679
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC polyperide (II) sequences (I) is useful as hybrid/satton probes, CC polyperide (II) sequences (I) is useful as hybrid/satton probes, CC and gene mapping, and in recombinant production of (II). The plantifying expressed genes. (I) is useful in gene therapy techniques (II) is useful in gene therapy techniques (II). (II) set to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as (II) are useful in medical as (II) are useful in medical inaging of sites expressing (II). (I) and (II) are useful in medical disorders involving aberrant portein expression or biological activity. (II) and III) are useful for treating (II) are useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 383;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2230
AAS72679;
                                                             AAS72679 standard; cDNA; 2922 BP
                                                                                                                                                                                                                     1990 GATGCCAAGAAAGCTCCCCATGAGGACACCCGTACACGACATCACTAACGAGGACGCCACA 2049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3093 BP; 875 A; 904 C; 862 G; 452 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID No 8482; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                         441 GC---CGAGGATGTCGCACAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCGCCAAC 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          201 AATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGTCCACGGCTTCGCCAACGGG 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         141 ATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGTCGCCGCACAGGGCATCGCC 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84 CAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC---CGAGGACGCCATCCAGGGC 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24 GCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCACC 83
                                                                                                                                                                                                                                                                                                                                                                                                             GGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGAGGACGCCCCCAGGGAATC 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCAGGGCATCGCCAACGAGGGCGCCGCCCAGGGCATCGCCAAGGAGGACGCCGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGCTAACGAGGACGCCGTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 302.4; D
Pred. No. 7.2e-
0; Mismatches
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es 91; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6; Gaps
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                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC polymeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The polymucleotides are also used in diagnostics as expressed sequence tags CC for identifying expressed genes. (I) is useful in gene therapy techniques (CII). (II) is useful for generating antibodies against it, detecting or creating a polypeptide in tissue, as molecular weight markers and as food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating the polypeptide and polynucleotide sequences have applications in CC dispostics, forensics, gene mapping, identification of mutations cresponsible for genetic disorders or other traits to assess biodiversity and no produce other types of data and products dependent on DNA and CC amino acid sequences. AASG4197-AASG4564 represent novel human CC diagnostic coding sequences of the invention.

CC diagnostic coding sequences of the invention.

CC specification, but was obtained in electronic format directly from WIPO. Cat fire wine, intrombombilshed not appear in the printed cat set the wine, intrombombilshed not appear in the printed cat for this patent did not appear in the printed cat for this patent did not appear in the printed cat for this patent did not appear in the printed cat for this patent did not appear in the printed cat for the wine, intrombombilshed not appear in the printed cat for this patent did not appear in the printed cat for the wine.
                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                            New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                       1966 CACGATATCACTAACGAGGACGCTGTCCACGGCATCGCTAACGAGGCCGCCGCCCAGGGC 2025
                                                                                                                                                                                                                                                                                  1906 GATGCCAAGAAAGCTCCCCATGAGGACACCCGTACACAACATCACTAACGAGGATGCCTCA 1965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2922 BP; 833 A; 829 C; 806 G; 454 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; SEQ ID No 8483; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-MAR-2001; 2001WO-US08631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-OCT-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; chromosome mapping; gene mapping; gene therapy; forensic;
food supplement; medical imaging; diagnostic; genetic disorder; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA encoding novel human diagnostic protein #8483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-FEB-2002 (first entry)
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                                                                                                                                                                                                                                                                                                                                               24 GCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCATCGCTAATGAGGACACCACC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                             CAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC---CGAGGACGCCATCCAGGGC 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                                                                             362;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      75.48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 269.6; DB Pred. No. 6.3e-33
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Pred. No. 5.1e-31;

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30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                             The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid probe of the invention. For this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; foetal liver; gene expression; single exon nucleic acid probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2326 GCTAATGACACCGTACAAGGCA-CGCTAAAAGAGGACGCTGTACACGACATCGCTAATGAG 2384
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                                                                                                                                                                                                                                       Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human fetal liver -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200157277-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human foetal liver single exon nucleic acid probe #15166.
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 Sequence 518 BP; 140 A; 170 C; 139 G; 69 T; 0 other;
                                                                                                                                                                                                                                                                                               WPI; 2001-483447/52.
                                                                                                                                                                                                                                                                                                                                                              (MOLE-) MOLECULAR DYNAMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                              04-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-JAN-2001; 2001WO-US00669
                                                                                                                                                                                                      Claim 4; SEQ ID NO 15166; 639pp + sequence listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABA66861;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          381
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                                                                                                                                                                                                                                                                                                                            Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0180312.
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                                                                                                                                                                                                                                                                                                                            Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    518 BP
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Query Match

51.5%;

Score 257.6;

DB 22;

Length 518;

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                                                                                                                    04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
                                                                                                                                                                                                                                                                                                                   Human; gene expression; heart; microarray; vascular system; probe; cardiovascular disease; hypertension; cardiac arrhythmia;
 Penn SG,
                              (MOLE-) MOLECULAR DYNAMICS INC
                                                            04-OCT-2000;
                                                                                      03-AUG-2000;
21-SEP-2000;
                                                                                                                                                                                30-JAN-2001; 2001WO-US00666
                                                                                                                                                                                                                09-AUG-2001.
                                                                                                                                                                                                                                             WO200157274-A2
                                                                                                                                                                                                                                                                                                       congenital heart disease;
                                                                                                                                                                                                                                                                                                                                                                 Probe #12396 for gene expression analysis in human heart cell sample.
                                                                                                                                                                                                                                                                                                                                                                                               23-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                               АВАЗЗЭЗО;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABA33930 standard; DNA; 518
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263 CCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122 CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCCAGGGCATCGCCAATGGGGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           65 CGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCCAGGGCATCGC--- 121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 CTACGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TA---ATGACACCGTACAAGGCA-CGCTAACGAGGATGCTGTACACGACATCGCTAATGA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC
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Hanzel DK,
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                                                                      2000US-0180312.
2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
                                                             2000GB-0024263
 Chen W,
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 Rank DR;
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RESULT 8
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AC AAK1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the
                            05-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to single exon nucleic acid probes for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 4; SEQ ID No 12396; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Single
Human brain expressed single exon probe SEQ ID NO: 15288
                                                        AAK15297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 518 BP; 140 A; 170 C; 139 G; 69 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-488899/53
                                                                                 AAK15297 standard; DNA; 518 BP
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                                                                                                                                                                                                        GGACACCATACAAGGCATCGGTAATGAGGACGTTGTATATGACATCGCTAACAAGGACAC
                                                                                                                                                                                                                                  GGACGCCGCCCAGGGAATCG----CCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGC 478
                                                                                                                                                                                                                                                                                        TAACGAGGACGCCGTCCAAGGGCATCGCTAACGAGGTGGCCGCCCAAGGGCATCGCCAACGA 421
                                                                                                                                                                                                                                                                                                                  CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC
                                                                                                                                                                                                                                                                                                                                           CATCGCCAACGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC
                                                                                                                                                                                                                                                                                                                                                                      CCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC--- 121
                                                                                                                                                                                                                                                             TA----ATGACACCGTACAAGGCA-CGCTAACGAGGATGCTGTACACGACATCGCTAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon nucleic acid probes for analyzing gene expression in human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
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                          (first entry)
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75.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 257.6;
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30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
04-OCT-2000;
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                                                                                                                                                                                                                                                                                                                                                                                    376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon nucleic acid probes
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                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
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                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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2000US-0236359.
2000GB-0024263.
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2000US-0608408.
2000US-0632366.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rank DR;
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Human; brain expressed exon; gene expression analysis; probe; microarray; Alzheimer's disease; multiple sclerosis; schizophrenia; epilepsy; cancer; ss.
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for analyzing gene expression in human

Example 4; SEQ ID NO: 15288; 650pp + Sequence Listing; English

The present invention provides a number of single exon nucleic acid probes which are derived from promic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples, which may enable the diagnosis and improved treatment of nervous system diseases such as Alzheimer's disease, multiple sclerosis, schizophrenia, epilepsy and cancers. The present sequence is one of the probes of the

Sequence 518 BP; 140 A; 170 C; 139 G; 69 T; 0 other;

0; Mismatches 114; Indels Score 257.6; D Pred. No. 5.1e-DB 22; Length 10; Gaps 4;

5 CTACGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCAT 64 CAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGGACGCTGTCCACGGCAT 82

CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGT 181

CGAGGACGCCGCCCACGGAATCGCCAGCGAGGACGCCCCCCAGGGGCATCGCCAACGAGGT 202

CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGT 262

CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGG 301

263 CCATGGCATCGCCAACGAGGACGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG 322

CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC CATCGCCAACGGGGACGCCAACGAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC 361

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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placenta. The probes are useful for antenatal diagnosis of human genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Probe #15758 used to measure gene expression in human placenta sample.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human placenta -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                          Sequence 518 BP; 140 A; 170 C; 139 G; 69 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 25; SEQ ID No 15758; 654pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-488897/53.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MOLE-) MOLECULAR DYNAMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-OCT-2000;
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        83 CGCTAACGAGGCCGCCCCAGGGCATCGCCAACGAGGACGCCGCCCAAGGGCATCGCCAA 142
                                                                                                                                                                                                    23 CAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGGACGCTGTCCACGGCAT 82
                                                                                                                                                                                                                                                                                                                          Loca.
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                                                                                                                                                     CGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC--- 121
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                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
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75.2%;
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                                                                                                                                                                                                                                                                                                                        Score 257.6; DB 22; Length 518; Pred. No. 5.1e-31;
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                                                                                                                                                                                                                                                                                                  Mismatches 114;
                                                                                                                                                                                                                                                                                                  Indels
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The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAS72676;
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                                                                                                                                                                                                                                                                                                       New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess biodiversity -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; chromosome mapping; gene mapping; gene therapy; food supplement; medical imaging; diagnostic; genetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA encoding novel human diagnostic protein #8480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200175067-A2
                                                                                                                                                                                                                                                Claim 1; SEQ ID No 8480; 103pp; English.
                                                                                                                                                                                                                                                                                                  biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; ABG08489
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    383 TA---ATGACACCGTACAAGGCA-CGCTAACGAGGATGCTGTACACGACATCGCTAATGA 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  323
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       479 CGCCCAGGGCATCGCCAACA 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362 TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-639362/73.
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2000US-0649167.
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RESULT 11
AAS72321
ID AAS72
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic coding sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at fit, wipo.int/pub/published_pct_sequences.
                                                                           Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
                                               Homo sapiens
                                                                                                                                DNA encoding novel human diagnostic protein #8125.
                                                                                                                                                                        13-FEB-2002
                                                                                                                                                                                                                                         AAS72321 standard; cDNA; 3522 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2376 CATCGCTAATGAGGACTCCGTATACGACATCGCTAATGAGGATGCCATATATGACATCGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2136 CGCTAACGAGGCCGACAAAGGGCATCGCCAACGAGGACGCCCAGGGCATCGCCAA 2195
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3345 BP; 954 A; 940 C; 913 G; 538 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                              422 GGACGCCGCCCAGGGAATCG----CCGAGGATGTCGCACAGGGCATCGCCAACGAGGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAGGGCATCGCCAATGGGGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  302 CATCGCCAACGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            242 CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGG 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182 CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65 CGCTAATGAGGACACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGCATCGC--- 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
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                                                                                                                                                                                                                                                                                                                                              CGCCCAGGGCATCGCCAACAAG 500
                                                                                                                                                                                                                                                                                                                           TCTACAAGCCGTCGCTAACAAG 2573
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TA---ATGACACCGTACAAGGCA-CACTAACGAGGACGCTGTACACGACATCGCTAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAACGAGGACGCCGTCCAGGGCATCGCTAACGAGGTGGCCGCCCAGGGCATCGCCAACGA 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCACGGCATCGCCAACGAGGATGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
                                                                                                                                                                                                                                                                                                                                                                                              GGACACCATACAAGGCATTGGTAATGAGGACGTTGTATATGACATCGCTAACAAGGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         372;
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                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50.0%; Score 250; DB 23; 74.1%; Pred. No. 5.6e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 3345;
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                                                                                                                                                                                                                2373 CGAGGACGCCCCACGGAATCGCCAGCGAGGACGCCCAGGGCATCGCCAACGAGGT 2432
                                                                                                                                                                                                                                                                                   2313 CGCTAACGAGGCCGCCGACAAGGGCATCGCCAACGAGGACGCCCCCCGGGCCTATCGCCAA 2372
                                                                           2493 CCACGGCATCGCCAACGAGGATGCTGCCCACGGCATTGCTAACGAGGATGCCGTGCACGG
                                                                                                                                                2433 CGCCGCCCAGGGCATCGCCAACGAGGACGCCGCCCAGGGCATCGCCAAGGAGGACGCCGC
                                                                                                 242 CCACGGCTTCGCCAACGGGGACGCCGTCCTCAGCTTCGCCAACGGGGACGCCGCCCAGGG
                                           302 CATCGCCAACGGGGACGCCACCAAGGGCATGGGCAACGAGGTCACCATCCACGGCATCGC
                                                                                                                                                                                                                                 122 CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTGCCCAAGGGCATCGCCAATGGGGT 181
                                                                                                                                                                                182 CGCCGCACAGGGCATCGCCAATGAGGACGCCACCCAGGGCATCGCCAACTGGGACGCCGT 241
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polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The Color primers of the primers, and for chromosome CC polymucleotides are also used in diagnostics as expressed sequence tags (CC for identifying expressed genes. (I) is useful in gene therapy techniques (II). (II) and tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (II) and (II) are useful for treating CC imaging of sites expressing (II). (II) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations (CC and to produce other types of data and products dependent on DNA and CC and to produce other types of data and products dependent on DNA and diagnostic coding sequences of the invention.

Note: The sequence data for this patent did not appear in the printed after the products of the printed of the products of the products of the printed of the products of the products of the printed of the products of the products of the printed of the products of the printed of the products of the products of the printed of the products of the products
                                                                                                                                                                                                                                                                                                                                              Matches 372;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3522 BP; 1005 A; 1006 C; 959 G; 552 T; 0 other;
                                                                                                               2253 CAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGGACGCTGTCCACGGCAT 2312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID No 8125; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-MAR-2000; 2000US-0540217
23-AUG-2000; 2000US-0649167
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65 CGCTAATGAGGACCACCCAGTGCATCGCCAACGAGGAAGCCGCCCAGGGGCATCGC--- 121
                                                                                                                                                                                                                                                                                                                                                                                                               Loca.
                                                                                                                                                                                                                              5 CTACGGCATTGCTGAGGACGCTGCCCAGGGCATCGCTAATGAGGACGCCGACCAGGGCAT 64
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                                                                                                                                                                                                                                                                                                                                                                                     Score 250; DB 23;
Pred. No. 5.6e-30;
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03-AUG-2000;
21-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human genome-derived single exon nucleic acid probes useful analyzing gene expression in human fetal liver -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-FEB-2000;
26-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; foetal liver; gene expression; single exon nucleic acid probe;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human foetal liver single exon nucleic acid probe #2604.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABA54299 standard; DNA; 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2729 TCTACAAGCCGTCGCTAACAAG 2750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2669 GGACACCATACAAGGCATTGGTAATGAGGACGTTGTATATGACATCGCTAACAAGGACAC 2728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2613 TA---ATGACACCGTACAAGGCA-CACTAACGAGGACGCTGTACACGACATCGCTAATGA 2668
                                                                                                                                                                                                                                       Sequence 495 BP; 121 A; 174 C; 129 G; 71 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a single exon nucleic acid probe for measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human fetal liver. The present sequence is a single exon nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 2604; 639pp + sequence listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Penn SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JAN-2001; 2001WO-US00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200157277-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABA54299;
                                                                                                                                                                                                                                                                                                                                                          probe of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MOLE-) MOLECULAR DYNAMICS INC.
                                                                                                                                                                                                                                                                                      from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   479 CGCCCAGGGCATCGCCAACAAG 500
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                                                 108 ATGAGGACACCGTACACAACATCACTAACGAGGATGCCTCACACGATATCACTAACGAGG 167
                                                                                            43 ATGAGGACGCCGACCAGGGCATCGCTAATGAGGACCACCCAGTGCATCGCCAACGAGG 102
                                                                                                                                                                   ocal
                                                                                                                                                                                                                                                                                                                            The sequence data for this patent did not form part of the
                                                                                                                                                299;
                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                              specification,
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                                                                                                                                             Conservative
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2000US-0207456
2000US-0608408
2000US-0632366
2000US-0234367
2000US-0236359
2000US-0236359
2000US-0024263
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                                                                                                                                                              47.0%;
77.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen W, Rank DR;
                                                                                                                                                                                                                                                                                                              but was obtained
                                                                                                                                             0; Mismatches
                                                                                                                                                                           Score 235;
                                                                                                                                                                   Pred.
                                                                                                                                                                   No.
                                                                                                                                                                                         DB 22;
                                                                                                                                                                                                                                                                                                              in electronic
                                                                                                                                                                   .3e-27
                                                                                                                                             85;
                                                                                                                                             Indels
                                                                                                                                                                                         Length 495;
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  RESULT 13
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
measuring human gene expression in a sample derived from human heart. The present sequence is one such probe. The probes may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; gene expression; heart; microarray; vascular system; probe;
cardiovascular disease; hypertension; cardiac arrhythmia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Probe #2522 for gene expression analysis in human heart cell sample
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-JAN-2001; 2001WO-US00666.
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                                                                                                                                                                                                                  Claim 1; SEQ ID No 2522; 530pp; English.
                                                                                                                                                                   The present invention relates to single exon nucleic acid probes for
                                                                                                                                                                                                                                                                                   Single exon nucleic acid probes for analyzing gene expression
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27-SEP-2000;
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2000US-0207456.
; 2000US-060840B.
; 2000US-0632366.
; 2000US-06323687.
; 2000US-0236359.
; 2000US-0236359.
; 2000US-0024263.
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Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
    Penn SG,
                                                                        (MOLE-) MOLECULAR DYNAMICS INC
                                                                                                                                            04-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                    30-JAN-2001; 2001WO-US00667.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; brain expressed exon; gene expression analysis; probe; microarray; Alzheimer's disease; multiple sclerosis; schizophrenia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human brain expressed single exon probe SEQ ID NO: 2574.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-NOV-2001
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2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
2000US-0236359.
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Query Match
                                                                                                                                                                                                                         Probe #2635 used to measure gene expression in human placenta sample
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30-JAN-2001; 2001WO-US00663
                                          09-AUG-2001
                                                                                   WO200157272-A2
                                                                                                                         Homo sapiens
                                                                                                                                                                genetic disorder; ss.
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                                                                                                                                                                                                                                                                                                            AAI33949;
                                                                                                                                                                                                                                                                                                                                                   AAI33949 standard; DNA; 495
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention provides a number of single exon nucleic probes which are derived from genomic sequences expressed in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 4; SEQ ID NO: 2574; 650pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Single exon nucleic acid probes for analyzing gene expression in
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAACGRGACGCCGCCCAGGGCATCGCCAACGGGGACGCCACCAGGGCATGGCCAACG 339
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCATATATGACATCGCTAATGACACCG
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                                                                                                                                                                                   human; placenta;
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Pred. No. 1
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30-JUN-2000; 2000US-0608408.
03-AUG-2000; 2000US-0632366.
21-SEP-2000; 2000US-0234687.
27-SEP-2000; 2000US-0236359.
04-OCT-2000; 2000GB-0024263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placenta. The probes are useful for antenatal diagnosis of human genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human genome-derived single exon nucleic acid probes useful for analyzing gene expression in human placenta \dot{\,}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 495 BP; 121 A; 174 C; 129 G; 71 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 25; SEQ ID No 2635; 654pp; English.
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                                                                                                                                                                                                                                                                                                                                                        103 AAGCCGCCCAGGGCATCGC---CGAGGACGCCATCCAGGGCATCGCCAACGAGGAGGTTG 159
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468 CCATATATGACATCGCTAATGACACCG 494
                  400 CCGCCCAGGGCATCGCCAACGAGGACG 426
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                                                           299; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/2,

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US-08-34-442B-4
US-08-34-442B-4
US-08-41-38-136-1
US-08-41-38-136-1
US-08-48-48-136-1
US-08-48-48-136-1
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10	on US/01  d, Thie. 1, Fredd. 1, Fredd. 2: Lymp; 2: Lymp; 3: 10: 2: Their		6246 80246 80595 2580	3408 5322	3331 325 2001	318 318 1456 1721	1276 3795
100.0%	N-1 Application US/08416478A Application US/08416478A Application US/08416478A Application US/08416478A Application Thierry Triebel, Frederic INVENTION: New Proteins p INVENTION: Lymphocytes, D INVENTION: Their pharmace SECUENCES: 10 INVENTION: Their pharmace DENCE ADDRESS: SEE: BROWDY AND NEIMARK, p 419 Seventh Street, N.W. Washington D.C. INTER: POPPY disk TYPB: Floppy disk RESI: POPPY disk R		2444W	<b>.</b> N W W U	<b>⊢</b> 23 ω	ហស≥០	
٠, ٠.	/08416478A ierry ederic w Proteins mphocytes, eir Pharma 0 D NEIMARK, Street, N. Street, N. Street, N. 1095/MS-DO 1095/MS-DO 1095/MS/416, 11995 11995 11: 528 11: 528 11: 528		US-08-943-731-640 US-08-943-731-640 US-09-078-294-4 US-09-078-294-3 US-09-050-863-2	PCI	-sn	DS-09-	US-
Score Pred.	CE 4, 6, 100 N. Max	ALIG	09-00	09-0 09-0 09-0	09-1 08-3 08-4	09-3 1-60 1-60	09-5 08-7
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APPLICANT: Triebel, Frederic
TITLE OF INVENTION: LYMPHOCYTES, DNA SEQUENCES ENCODING THESE PROTEINS AND
TITLE OF INVENTION: LYMPHOCYTES, DNA SEQUENCES ENCODING THESE PROTEINS AND
TITLE OF INVENTION: THEIR PHARMACEUTICAL AND BIOLOGICAL USES
                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/416,478
FILING DATE: 04-APR-1995
CTACCTECATION: 426
                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy
                CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: 1
                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: BROWDY AND NEIMARK, P.L.L.C.
STREET: 419 Seventh Street, N.W., Suite 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481 CTCACCCGGCGCGCCCCTCC 500
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                                                                                                                                                   APPLICATION NUMBER: US/O
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS_MS-DOS
SOFTWARE: PatentIn Release #1.0
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                                                                                                                                                                                                                                                                                                                                         COUNTRY:
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No. 5874250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
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  08-SEP-1992
                                                                                                                                                                                                                    Release #1.0, Version #1.25
                     US 07/854,644
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1871 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
TOPOLOGY: linear
TOPOLOGY: linear
                                                                                                                                                                            Sequence 1, Application US/08394442B Patent No. 5976877 GENERAL INFORMATION:
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                     APPLICANT: Triebel, Thierry
APPLICANT: Triebel, Frederic
TITLE OF INVENTION: Lymphocytes, DNA Sequences Encoding These Proteins And
TITLE OF INVENTION: Their Pharmaceutical And Biological Uses
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS: 11
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NAME/KEY:
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REFERENCE/DOCKET NUMBER: HE
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STREET:
                ADDRESSEE:
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                                                                                                                                                                          INFORMATION:
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419 Seventh Street, N.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 500; DB 2; Length 1871; ilarity 100.0%; Pred. No. 6.2e-111; Conservative 0; Mismatches 0; Indels 0
              BROWDY AND NEIMARK, P.L.L.C
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Suite 400
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COMPUTER READABLE FORM:

CITY: Washington STATE: D.C.

COUNTRY:

U.S.A.

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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/394,442B
FILING DATE: 24-FEB-1995
CLASSIFICATION: 424
ATTORRENT APPLICATION: 424
ATTORRENT APPLICATION: 25,618
REGISTRATION NUMBER: 25,618
REGISTRATION INFORMATION:
REFERENCE,DOCKET NUMBER: HERCEND-2A
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: (202) 737-3528
INFORMATION FOR SEG ID NO: 1:
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LENGTH: 1871 base pairs
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121 CACCTCCCTCTCCAGAACTTCTCCTTTACCCCCCAACCCCCACCACTGCCCCCTTTCC 180
481 CTCACCCGGCGCGCCCTCC 500
                                       481 CTCACCCGGCGCGCCCCTCC 500
                                                                                  421 AGCATCAGCCAGACAGTGGCCCGCCCGCCTGCCCCCGGCCATCCCCTGGCCCCCGGCC 480
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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LOCATION:
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STRANDEDNESS: single
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100.0%; Pred. No. 6.2e-111;
ative 0; Mismatches 0;
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RESULT 4

RESULT 5

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 37,971
REFERENCE/DOCKET NUMBER: HERC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-5197
TELEPANCE: (202) 737-5528
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                             Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Hercend, T
APPLICANT: Triebel, F
TITLE OF INVENTION: U
TITLE OF INVENTION: U
TITLE OF INVENTION: U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
ADDRESSEE: BRODY AND NEIMARK, P.L.L.C.
STREET: 419 Seventh Street, N.W., Suite 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/854,644
FILING DATE: 08-SEP-1992
ATTORNEY/AGENT INFORMATION:
NAME: YUN, Allen C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
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STREET: 419 Seven
CITY: Washington
STATE: D.C.
450 GCCGCCCCGGCCATCCCCTGGCCCCCGGCCCTCACCCGGCGGCGCCCTCC 500
                                                                          210 GCTGCCCAGACCATAGGAGAGGTGTGGGGAGGCTCAGTTCCTGGGCTTGCTGCTGTTTCTGCAG 269
                                                                                                                                                   121 GCCCAGGAGGGGGCTCCTGCCAGCTCCCCTGCAGCCCCACAATCCCCCCTCCAGGATCTC
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                                                                                                                                                                                                                                                             270 CCGCTTTGGGTGGCTCCAGTGAAGCCTCTCCAGCCAGGGGCTGAGGTCCCCGGTGGTGTGG 329
                                                                                                                                                                                                                                                                                                                                                           Local 291;
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                                                                                                                                                                                                                            61 CCGCTTTGGGTGGCTCCAGTGAAGCCTCTCCAGCCAGGGGCTGAGGTCCCGGTGGTGGG 120
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Lymphocytes, DNA Sequences Encoding These Proteins And
Their Pharmaceutical And Biological Uses
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US-08-474-988B-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY AGENT INFORMATION:

NAME: YUN, Allen C.

REGISTRATION NUMBER: 37,971

REFERENCE/DOCKET NUMBER: HERCI
TELECOMMUNICATION: TELECOMMUNICATION INFORMATION:

TELECHAX: (202) 628-5197

TELEPHONE: (202) 678-5197

TELEPHONE: (202) 737-3528

INFORMATION FOR SEQ ID NO: 5:

SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                     Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/474,988B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATE:
APPLICATION NUMBER: US 08/416,478
FILING DATE: 04-APR-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Hercend, Thierry
APPLICANT: Triebel, Frederic
TITLE OF INVENTION: NEW PROTEINS PRODUCED BY HUMAN
TITLE OF INVENTION: LYMPHOCYTES, DNA SEQUENCES ENCODING THESE PROTEINS AND
TITLE OF INVENTION: THEIR PHARMACEUTICAL AND BIOLOGICAL USES
NUMBER OF SEQUENCES: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
450 GCCGCCCGGCCATCCCCTGGCCCCGGCCCTCACCCGGCCGCGCCCCTCC 500
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CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20004
                                                         330 GCCCAGGAGGGGCTCCTGCCCAGCTCCCCTGCAGCCCCACAATCCCCCTCCAGGATCTC 389
                                                                                                                                                                                           61 CCGCTTTGGGTGGCTCCAGTGAAGCCTCTCCAGCCAGGGGCTGAGGTCCCGGTGGTGTGG 120
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OPERATING SYSTEM: PC-DOS/MS-DOS
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5. 5874250
                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
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22..1161
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linear
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                                                                                                                                                                                                                                                                                                                                                 58.2%; Score 291; DB 2; 100.0%; Pred. No. 4.5e-61;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Release #1.0, Version #1.25
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; LOCATION:
US-08-394-442B-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (202) 688-51
TELEFAX: (202) 737-3528
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 1104 base naironyee
                                                                                                                                                                                                                                                                                                                                                                                   Matches
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
THM PC CON
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: BROWDY, ROGER L.
REGISTRATION NUMBER: 25,618
REFERENCE/DOCKET NUMBER: HEI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                     121 GCCCAGGAGGGGCTCCTGCCCAGCTCCCCGCACAATCCCCCCTCCAGGATCTC 180
                                                                                                                                                                                                             330 GCCCAGGAGGGGGCTCCTGCCCAGCTCCCCTGCAGCCCCACAATCCCCCTCCAGGATCTC 389
                                                                                                                                                                                                                                                                              270 CCGCTTTGGGTGGCTCCAGTGAAGCCTCTCCAGCCAGGGGCTGAGGTCCCGGTGGTGGG 329
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CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                              61 CCGCTTTGGGTGGCTCCAGTGAAGCCTCTCCAGCCAGGGGCTGAGGTCCCGGTGGTGTGG 120
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                                                                                                                                                                                                                                                                                                                                                                                   291;
                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : 1164 base pairs
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SYSTEM: PC-DOS/MS-DOS
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737-3528_
                                                                                                                                                                                                                                                                                                                                                                                                 58.2%; Score 291; DB 2; 100.0%; Pred. No. 4.5e-61;
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                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
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New Proteins Produced By Human
Lymphocytes, DNA Sequences Encoding These Proteins And
Their Pharmaceutical And Biological Uses
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US-08-474-988B-4
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: INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERSTICS:
LENGTH: 999 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-416-478A-4
                                                       Sequence 4, Application US/08474988B Patent No. 5874250
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 232;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/854,644
FILING DATE: 08-SEP-1992
ATTORNEY/AGENT INFORMATION:
NAME: YUN, Allen C.
REGISTRATION NUMBER: 37,971
REFERENCE/DOCKET NUMBER: HERCEND=1A
TELECOMMUNICATION INFORMATION:
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                                     GENERAL INFORMATION:
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APPLICANT: Triebel, Frederic
TITLE OF INVENTION: Lymphocytes, DNA Sequences Encoding These Proteins And
TITLE OF INVENTION: Their Pharmaceutical And Biological Uses
APPLICANT: Hercend, Thierry APPLICANT: Triebel, Frederic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                 947 TTTTCTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCAGACCATAGGAGAGATG 999
                                                                                                                                                                                              181 TTTTCTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCCAGACCATAGGAGAGATG 233
                                                                                                                                                                                                                                                        888 CACCTCCCTCTGCAGAACTTCTCCTTT-CCCCCCACCCCCCACCACCACTGCCCCCTTTCC
                                                                                                                                                                                                                                                                         121 CACCTCCCCTCTCTGCAGAACTTCTCCCTTTACCCCCCACCCCCCCACCACCACTGCCCCTTTCC 180
                                                                                                                                                                                                                                                                                                                                                                                                              768 TCAGGCTGCCTGATCTGCCCAGCTTTCCAGCTTTCCTCTGGATTCCGGCCTCTGGTCATC 827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/416,478A FILING DATE: 04-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCAGGCTGCCTGATCTGCCCAGCTTTCCAGCTTTCCTCTGGATTCCGGCCTCTGGTCATC 60
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Similarity 99.6%;
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; Sequence 4, Application US/08394442B
; Patent No. 5976877
; GENERAL INFORMATION:
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US-08-394-442B-4
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ELLING DATE: 04 - APR-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NOMBER: US 07/854,644
ELLING DATE: 08 - SEP-1992
ATTORNEY_AGENT INFORMATION:
NAME: YUN, Allen C.
REGISTRATION NUMBER: 37,971
REFERENCE/DOCKET NUMBER: HERCEND-1
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 1080-5197
TELECOMMUNICATION 1080-5197
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TELEFAX: (202) 737-3528
INFORMATION FOR SEQ ID NO: 4:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CUREBY APPLICATION DATA:
APPLICATION NUMBER: US-708/474,988B
FILING DATE: 07-UN-1995
APPLICANT: Hercend, Thierry APPLICANT: Triebel, Frederic TITLE OF INVENTION: New Proto TITLE OF INVENTION: Lymphocy TITLE OF INVENTION: Their Ph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 999 base pairs
TYPE: nucleic acid
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CLASSIFICATION: 45
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/416,478
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TITLE OF INVENTION: LYMPHOCYTES, DNA SEQUENCES ENCODING THESE PROTEINS AND
TITLE OF INVENTION: THEIR PHARMACEUTICAL AND BIOLOGICAL USES
NUMBER OF SEQUENCES: 11
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                                                                                                                                                                                                                                                                                                                                                           888 CACCTCCCTCTGCAGAACTTCTCCTTT-CCCCCCACCCCCCCACCACCACCTGCCCCTTTCC 946
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  New Proteins Produced By Human
Lymphocytes, DNA Sequences Encoding These Proteins And
Their Pharmaceutical And Biological Uses
                                                                   Frederic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
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NUMBER OF SEQUENCES:

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FILING DATE: 24-FEB-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: BROWDY, ROGET L.
REGISTRATION NUMBER: 25,618
REGISTRATION NUMBER: HERC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-5197
                                                                                                                                                                                                                                                                GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                      APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKMER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 999 base pairs
TYPE: nucleic acid
                                                                                                                                                          CORRESPONDENCE ADDRESS:
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CURRENT APPLICATION DATA:
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ADDRESSEE: BROWDY AND NEIMARK, P.L.L.C.
STREET: 419 Seventh Street, N.W., Suite 400
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                                                                                                       STREET: 1800 Dia
CITY: Alexandria
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                                                                      COUNTRY:
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Similarity 99.6%;
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1800 Diagonal Road, Suite 500
                                                                          USA
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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APPLICANT:

APPLICANT: APPLICANT:

KLINGER, KATHERINE V LANDES, GREGORY M BURN, TIMOTHY C CONNORS, TIMOTHY D DACKOWSKI, WILLI GERMINO, GREGORY

WILLIAM

APPLICANT: APPLICANT:

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INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 7218 base pairs
LENGTH: nucleic acid
Sequence 2, Application Patent No. 6071717
GENERAL INFORMATION:
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IMMEDIATE SOURCE:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)836-9300
TELEPAX: (703)683-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0 CURRENT APPLICATION DATA:
                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                   372 ATCCCCCTCCAGGATCTCAGCCTTCT 397
                                                                                                                                                                                            312 GAGGTCCCGGTGGTGTGGGCCCAGGAGGGGGGCTCCTGCCCAGCTCCCCTGCAGCCCCACA 371
                                                                                                                                                                                                                                                     132 CTGCAGAACTTCTCTTTACCCCCCCACCCCCACTGCCCCCTTTCCTTTTCTGACCT 191
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                       Application US/08658136
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26-AUG-1991
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INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 53526 base pairs
TYPE: nucleic acid
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS_MS-DOS
OPERATING SYSTEM: PC-DOS_MS-DOS
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION: TELEPHONE: 508-872-8400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: LASSEN, ELIZABETH
REGISTRATION NUMBER: 31,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                         APPLICANT:
                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: GENZYME CORPORATION
                                                                                                                   TITLE OF INVENTION: POLYCYSTIC KIDNEY DISEASE GENE NUMBER OF SEQUENCES: 58
                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110 ACCCCTTCCTCCACCTCCCTCTCTGCAGAACTTCTCCTTTACCCCCCACCCCACCCCCACCACCT 169
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OTTY: FRAMINGHAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50 CTCTGGTCATCCCCCCCCCCCTCTCCAAGGCCCTTCCTGGTCTCCCTTCTTCTAGA 109
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                                  CITY: FRAMINGHAM
STATE: MASSACHUSI
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                                                                   STREET:
ZIP: 01701
             COUNTRY:
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LANDES, GREGORY M
BURN, TIMOTHY C
                 USA
                                                                                                                                                        QIAN, FENG
                                                                                                                                                                       GERMINO,
                                                                                                                                                                                     CONNORS, TIMOTHY D
DACKOWSKI, WILLIAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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55.2%;
                                                                                                                                                                       GREGORY
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Pred. No. 0.0065; 
0; Mismatches 78; Indels 0;
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US-09-007-005-17/c
; Sequence 17, Application US/09007005B
; Patent No. 6258558
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us-09-007-005-17
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TELEPAX: 508-872-5415
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 53577 base pairs
TYPE: nucleic acid
                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 33
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
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                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/007,005B CURRENT FILING DATE: 1998-01-14 EARLIER APPLICATION NUMBER: 60/035,963 EARLIER FILING DATE: 1997-01-27 EARLIER APPLICATION NUMBER: 60/064,491 EARLIER FILING DATE: 1997-11-06
                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: SELECTION OF PROTEINS USING RNA-PROTEIN TITLE OF INVENTION: FUSIONS FILE REFERENCE: 00786/350003
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Szostak, Jack W. APPLICANT: Roberts, Richard W. APPLICANT: Liu, Rihe
                                                                                                                                                    LENGTH: 28
TYPE: RNA
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LOCATION: (1)...(289)
OTHER INFORMATION: n = A,T,C or G
                                                                         OTHER INFORMATION: Translation template FEATURE:
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                                                                                                                  FEATURE:
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REFERENCE/DOCKET NUMBER: GE
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
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ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/658,136
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APPLICANT: SZOSTAK, Jack W.

APPLICANT: Roberts, Richard W.

APPLICANT: Liu, Rihe

TITLE OF INVENTION: SELECTION OF PROTEINS USING RNA-PROTEIN

TITLE OF INVENTION: SELECTION OF PROTEINS USING RNA-PROTEIN

FILE REFERENCE: 00786/350007

CURRENT APPLICATION NUMBER: US/09/244,796

CURRENT FILING DATE: 1999-02-05

EARLIER APPLICATION NUMBER: 60/035,963

EARLIER APPLICATION NUMBER: 60/064,491

EARLIER APPLICATION NUMBER: 60/064,491

EARLIER APPLICATION NUMBER: 09/007,005

EARLIER APPLICATION NUMBER: 09/007,005

EARLIER FILING DATE: 1997-01-14

NUMBER: FEST FOR 50 NUMBER: 09/007,005
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NAME/KEY: misc_feature

; LOCATION: (1)...(289)

; OTHER INFORMATION: n = A,T,C or G

US-09-244-796-17
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: Sequence 17, Application US/09244796
: Patent No. 6281344
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TYPE: RNA
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                                                                             187 GACCTCCTTTT 197
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67 YNYNYSYNYNY 57
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Local Similarity 3.7%;
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:; Pred. No. 0.0039;

99; Mismatches 85; Indels
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US-09-165-264-11/c
Job time :
                     Search completed: October 10, 2002, 19:28:21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 11
LENGTH: 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence 11, Application US/09165264 Patent No. 6197510
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                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Vinayagamoorthy, Thuraiayah
TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Artificial Sequence
                                                                              138 cccccccccccc 126
                                                                                                                      181 TTTTCTGACCTCC 193
                                                                                                                                                             61 CCTCCCCACCCTCTCTCCAAGGCCCTCTCCTGGTCTCCCTTCTTCTAGAACCCCTTCCTC 120
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  65.7333 secs
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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1 tcaggctgcctgatctgccc.....ctcacccggcgcgccctcc 500
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

11.4 1101 12 (	.7 948 12 ( .6 925 12 (	11.8 917 12 11.7 796 12 11.7 945 12	400	14.0 538 12.6 764	.4 381 .2 602 .8 408	59.6 586 10 46.4 377 10	Result Query No. Score Watch Length DB ID
	w w .	001#	AG060752 Pan trogl BI416660 hasp001xm AL066537 Drosophil	AL514267 AL514267 AL547921 AL547921	BG900314 HOA37-1-C BI060106 IL3-UT0111 BI060032 IL3-UT011	BG898429 HOA55-1-F BG898484 HOA19-1-A	Description

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10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.9	10.9	11.0	11.0	11.0	11.0	11.1	11.1	11,1	11.1	11.2	11.2	11.2	11.2	11.2	11.3
1061	952	796	776	689	672	419	768	663	1110	901	788	1201	883	959	724	1451	703	1236	1141	1183	869	1101	1042	966	949	932	766
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## ALIGNMENTS

BASE COUNT ORIGIN		FEATURES Source		COMMENT	JOURNAL	TITLE	REFERENCE AUTHORS	ACCESSION VERSION KEYWORDS SOURCE ORGANISM	RESULT 1 BG898429 LOCUS DEFINITION
Directional 90 t 1 others	sm~"Homo sapie f="taxon:9606" lib="HOA (Huma _type="cartila _type="cartila	Location/Qualifiers 1586	UW2109 GlaxoSmithKline 709 Swedeland Road, P.O. Box 1539, King of Prussia, PA 19406, USA Tel: 610-270-7245 Teax: 610-270-5598 Email: sanjay_kumar-1@gsk.com Seq primer: T7.	21482651 Contact: Sanjay Kumar	sequenced tags (RSTs) each from adult human normal and osteoarthritic cartilage cDNA libraries osteoarthritic Cartilage 9 (7), 641-653 (2001)	Sathe,G., Mui,P., Agarwal,P., Badger,A.M., Lee,J.C., Gowen,M. and Lark,M.W. Ldark,M.W. and initial characterization of 5000 expressed	<pre>Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; EuteLeostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 586) Kumar, S., Connor, J.R., Dodds, R.A., Halsey, W., Van Horn, M., Mao, J.,</pre>	######################################	BG898429 586 bp mRNA linear EST 06-NOV-2001 HOASS-1-F8.R HOA (Human Osteoarthritic Cartilage) Homo sapiens cDNA

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RESULT 2
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Best Local Similarity
Matches 298; Conserv
                                                  Matches 232;
                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
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1 TCAGGCTGCCTGATCTGCCCAGCTTTCCAGCTTTCCTCTGGATTCCGGCCTCTGGTCATC 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identification and initial characterization of 5000 expressed sequenced tags (ESTs) each from adult human normal and osteoarthritic cartilage CDNA libraries
Osteoarthritis Cartilage 9 (7), 641-653 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 377)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BG898484 377 bp mRNA linear EST 06-NOV-200 HOA19-1-A4 HOA (Human Osteoarthritic Cartilage) Homo sapiens cDNA, mRNA sequence.
BG898484
                                                                                                                                                                                                                                                                                                          Tel: 610-270-7245
Fax: 610-270-5598
                                                                                                                                                                                                                                                                                                                        GlaxoSmithKiine
709 Swedeland Road, P.O. Box 1539, King of Prussia, PA 19406, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST
                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                Contact: Sanjay Kumar
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                                                  Conservative
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                                                                                                                                                                                                                                                                                        sanjay_kumar-1@gsk.com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Connor, J.R., Dodds, R.A., Halsey, W., Van Horn, M., Mac, Mui, P., Agarwal, P., Badger, A.M., Lee, J.C., Gowen, M.
                                                                                                                                   /wau_nost="E.coli DH10 B"
/note="Vector: psport I; Site_1: Sall; Site_2: Not1;
Directional"
                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="HOA (Human Osteoarthritic Cartilage)"
/tissue_type="cartilage"
/lab_host="E.coli DH10 B"
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Pred. No. 1.2e-34;
Pred. no. 1.2e-34;
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BG900314
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Sanjay Kumar
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Similarity 99.6%;
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181 TTTTCTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCAGACCATAGGAG 228
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                                                             274 CACCTCCCTCTCTGCAGAACTTCTCCTTTACCCCCCACCCCCCACCACTGCCCCTTTCC
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                                                                                                                          CACCTCCCTCTCTGCAGAACTTCTCCTTTACCCCCCACCCCCCACCACTGCCCCCTTTCC 180
                                                                                                                                                                                       CCTCCCCACCCTCTCCCAAGGCCCTCTCCTGGTCTCCCTTCTTCTAGAACCCCTTCCTC
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Osteoarthritis Cartilage 9 (7), 641-653 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kumar,S., Connor,J.R., Dodds,R.A., Halsey,W., Van Horn,M., Mao,J.
Sathe,G., Mul,P., Agarwal,P., Badger,A.M., Lee,J.C., Gowen,M. and
Lark,M.W.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 381)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sanjay_kumar-1@gsk.com
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/odb_xref="Homon:9606"
/ob_xref="Homon:9606"
/clone_lib="HOA (Human Osteoarthritic Cartilage)"
/tissue_type="cartilage"
/lab_host="E.coli pH10 B"
/note="Vector: pSPORT I; Site_1: SalI; Site_2: NotI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                        Score 227; DB 10; pred, No. 1e-33; Pred, No. 1e-33; Indels
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                                                                                                                             345 CUTGCCCAGCTCCCCTGCAGCCCCACAATCCCCCTCCAGGATCTCAGCCTTCTGGGAAGA 404
185 CCTGCCCAGCTCCCCTGCAGCCCCACAATCCCCCTCCAGGATCTCAGCCTTCTGGCGAAGA 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            334 TTTTCTGACCTCCTTTTGGAGGGCTCAGCCCTGCCCAGACCATANGAG 381
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1 (bases 1 to 602)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Roldan,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deoliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Datail: asimpsoneludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=IL3st2=IL3-UT0114-
160101-420-4066t3=9001-01-166t4=1)
Seq primer: puc 18 forward
High quality sequence stop: 601.
Location/Qualifiers
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
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Fax: +55-11-2707001
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55; Conservative
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Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
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/db_xref="taxon:9606"
/db_xref="taxon:9606"
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/dev_stage="Adult"
/note="0rgan: uterus_tumor; Vector: puc18; Site_1: SmaI;
/note="0rgan: uterus_tumor; Vector: puc18; Site_1: SmaI
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95.7%;
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ORGANISM
RESULT 6
AL514267 AL514267 S38 bp mRNA linear EST 13-FEB-2001
DEFINITION AL514267 LTI_NFL006_PL2 Homo sapiens cDNA clone CL0BB007ZD09 3
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BI060032
LOCUS
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185 CETECCAGCTCCCCTCCAGCCCACAAATCCCCCTCCAGGATCTCAGCCTTCTGCGAAGA 244
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125 CTAGTGAAGCCTCTCCAGCCAGGGCTGAAGTCCCGGTGGTGTGGGCCCAGGAGGGGGCT 184
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IL3-UT0114-160101-419-A10 UT0114 Homo sapiens CDNA, mRNA sequence.
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Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
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This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=IL36t2=IL3-UT0114-
160101-419-Aloct3-2001-01-164t4-1)
Seq primer: puc 18 forward
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
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55-11-2707001
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/db_xref-"taxon:9606"
/clone_lib-"UT0114"
/dev_stage-"Adult"
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AUTHORS
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Best Local Similarity 42.7%; Pred. no. 0.0083;
Matches 198; Conservative 24; Mismatches 242; Indels
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272 GCTTIGGGTGGCTCCAGTGAAGCCTCTCCAGCCAGGGGCTGAGGTCCCGGTGGTGTGGGC 331
                                                                                                                                                                                                                                                                                                                              92 GGTCTCCTTCTAGAACCCTTCCTTCCACCTCCTCTGTGCAGAACTTCTCTCTTAC 151
135 CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCTTTCC 194
                         332 CCAGGAGGGGGCTCCTGCCCAGCTCCCCTGCAGCCCCCACAATCCCCCTCCAGGATCTCAG 391
                                                                                                                                                                 152 CCCCCACCCCCACCACTGCCCCCTTTCCTTTTCTGACCTCCTTTTGGAGGGCTCAGCGC 211
                                                                                                                                                                                                                                              212 TGCCCAGACCATAGGAGAGATGTGGGAGGCTCAGTTCCTGGGCTTGCTGTTTTCTGCAGCC 271
                                                                                                                                                                                                                                                                                                                                                                                  32 TTTCCTCTGGATTCCGGCCTCTGGTCATCCCTCCCACCCTCTCTCCAAGGCCCTCTCCT 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: segrefégenoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
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AL514267
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Li. B.B., Gruber C., Jessee, J. and Polayes, D. (bl. 1) Length cDNA libraries and normalization inpublished (2001)
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                                                                           143 CCTCGGAAGCCGCCTGGAGGACGTCCTGTGGCTGCAGGAGGTCTCCCAACCTGTCAGAGTG 84
                                                                                                                                                 365 CCCCACAATCCCCCTCCAGGATCTCAGCCTTCTGCGAAGAGCAGGGGGTCACTTGGCAGCA 424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185 CTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCCAGACCATAGGAGAGAGGTGTGGGAGGCTCA 244
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BP 191 91006 EVRY cedex - France
Email: segrefégenoscope.ons.fr. Web : www.genoscope.cns.fr.
Location/Qualifiers
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1. (bases 1 to 744)
Li Wi B., or Luber, C., Jessee, J. and Polayes, D.

Full length cONA libraries and normalization
Unpublished (2001)
Contact: Genoscope
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AL547921 LTI_NFL006_PL2 Homo sapiens cDNA clone CS0DI033YH07 3
prime, mRNA sequence.
AL547921
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19; Conservative
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//Clone=CSODIO33HOYO"
//Clone=Lib="LTI.NFL00E_PIL2"
//Clone=Lib="LTI.NFL00E_PIL2"
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170 c 238 g 23 t 159 others
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GCTGAGTCCCAGCCCTSCSCCCTGAGCCGGTCCCCCTTCCGCAAGCGCCCCACCGATCC

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                                                                                                                                                                                                                                                                                                                                                                                192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/,
Tel:81-45-503-911, Fax:81-45-503-9170)
Tel:81-45-503-911, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AG060752 960 bp DNA Pan troglodytes DNA, clone: PTB-048J12.F,
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Totoki,Y., Watanabe,H. and Sakaki,Y.
Direct Submission
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Totoki,Y., Watanabe,H. and Sakaki,Y.
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troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male Library clone:PTB-048J12.F.
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R.Site 2 : SacI
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24 c 670 q 38 + 178 - 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Pan troglodytes"
/db_xref="taxon:9598"
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135 CAGAACTTCTCCTTTACCCCCCACCCCCCCACCACTGCCCCTTTCCTTTTCTGACCTCCT 194
                                          66 NNNCCCNC 59
                                                                                                                                                                      Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: +46 18 67 15 98
Fax: +46 18 30 92 45
Email: Fred-Asiegbuenykopat.slu.se
Seg primer: T7 primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Fred O. Asiegbu
Dept. of Forest Mycology & Pathology
Swedish University of Agriculture, Box 7026,5-750 07, Uppsala,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Asiegbu, F.O., Nahalkova, J., Choi, W., Stenlid, J. and Dean, R.A. Expressed sequence tags of randomly selected cDNA clones from the interaction of the root rot fungus (Heterobasidion annosum) with seedling roots of Scots pine (Pinus sylvestris)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished
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1 (bases 1 to 1222)
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                                                                                                                                                                                                                                                                                                                /organism="Pinus sylvestris/Heterobasidion annosum"
/db_xref="taxon:169015"
/dlone="hasp001xm19f"
/clone=lib="Heterobasidion annosum - Scots pine infection stage subtraction cDNA library (hasp)"
/dev_stage="Seedling roots of Scots pine were infected for 6 days with H. annosum"
/note="vector: pr-Adv; Site_1: EcoRI; The subtractive hybridiation cDNA library was constructed from scots pine roots infected for 6-days with mycelia of Heterobasidon annosum (FP5)."
Heterobasidon annosum (FP5)."
99 a 23 c 1007 g 4 t 79 others
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                                                                                                                                                                                                                               Score 60.8; DB 10; Length 1222; Pred. No. 0.049;
                                                                                                                                                                                                               Mismatches
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                                                                                                                                                                                                                             - Web : www.genoscope.cns.fr)

Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pleter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic Strain y2; on bw sp, the same strain used for the BDGP's pland EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be cocation/Qualifiers

Strain VGR ACT CARD ACT CONTROL OF CO
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Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; 
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
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Drosophila melanogaster genome survey sequence TET3 end of BAC #
BACR09C16 of RPCI-98 library from Drosophila melanogaster (fruit
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fruit fly.
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                                                                                   /organism="Drosophila melanogaster"
/db_xref="taxon:7227"
/clone_lib="RPCI-98"
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                                                          /note="end : TET3"
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                                                                                                                                                                                                                                                                               Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Subhiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045 Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-911, Fax:81-45-503-9170) Tel:81-45-503-911, Fax:81-45-503-9170) Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AG081214 917 bp DNA linear GSS (Pan troglodytes DNA, clone: PTB-077J19.R, genomic survey)
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92; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
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GSS; GSS (genome survey
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troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male
Library clone:PTB-077J19.R.
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R.Site 2
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/clone="PTB-077J19.R"
                     /organism="Pan troglodytes"
/db_xref="taxon:9598"
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           and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170) Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                    AG110286.1 GI:16730805
GSS; GSS (genome survey sequence).
Pan troglodytes male lymphoblast DNA,
BAC Library clone:PTB-115P11.R.
                                                                                                                      Fujiyama, A., Hattori, M., Totoki, Y., Watanabe, H. a.
                                                                                                                                                              Unpublished
                                                                                                                                                                             BAC
                                                                                                                                                                                         Fujiyama, A., Hattori, M.,
Totoki, Y., Watanabe, H. ar
                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                            Pan troglodytes
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Pan troglodytes DNA,
                                                                                            Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical
                                                                                                            Direct Submission
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/clone_lib="PTB Chimpanzee Male BAC Library"
1 35 c 666 g 46 t 102 others
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RESULT 13
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Drosophila melanogaster genome survey sequence TET3 end of BAC #
BACR14F09 of RPCI-98 library from Drosophila melanogaster (fruit
Genoscope
                    Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda;
Pterygota; Neoptera; Endopterygota; Diptera; Brachyco
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
                                                           Drosophila melanogaster
                                                                                  GSS
                                                                                                         fly), genomic survey sequence.
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LIBRARY
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           (bases 1 to
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/clone_lib="PTB Chimpanzee Male BAC Library"
1 59 c 644 g 10 t 24 others
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/db_xref="taxon:9598"
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survey sequence TET3 end of BAC #
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RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGGTGGTGTGGGCCC 333
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 948)
                                                                                                                                                                        Drosophila melanogaster genome survey sequence TET3 end of BAC: BACR36N04 of RPCI-98 library from Drosophila melanogaster (fruit fly), genomic survey sequence
                                                                            Drosophila melanogaster
                                                                                                                       GSS
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                                                                                                 fruit fly.
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/db_xref="taxon:7227"
/clone_lib="RPCI-98"
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32.9%;
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Pred. No. 0.12
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TITLE
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                                                                                                                                                       486 CCGGCGGCGCCCTCC 500
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                                                                                                                                                                                                                                                                                                                                                                            581 CCCCCBGCCTBCYTCTGGKKKGGGCSTGKGGGCCCKYKTCCCCCCCCCCTKCCCCCCCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Maron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic Strain y2; on bw sp, the same strain used for the BDGP's P1 and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be found at http://bacpac.med.buffalo.edu/drosophila_bac.htm.
                                                                                                                                                                                                   CCCTGGCCCGKCYCC
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Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - FRANCE (E-mail : segref@genoscope.cns.fr
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/db_xref="taxon:7227"
/clone_lib="RPCI-98"
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355 c 125 g
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DEFINITION

Drosophila melanogaster genome survey sequence TET3 end of BAC # BACR19D16 of RPCI-98 library from Drosophila melanogaster (fruit

DNA

03-JUN-1999

sequence.

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REFERENCE
AUTHORS
TITLE
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Search completed: October 10, 2002, 20:28:21 Job time: 701.733 secs
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Matches 48; Conserv
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BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr

- Web : www.genoscope.cns.fr)

Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial ECORI digestion of Drosophila DNA provided by the BDGP from the isogenic strain y2; cn bw sp, the same strain used for the BDGP's pl and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be received.
                                                                                                                                                                                                                                                                 SSSSSTSTSSSSVSSGSKSSTBSSGSBSSSGSSSSSSSSBBSCTSTSSSSSSSSSSST 757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCCCAGACCATAGGAGAGATGTGGGAGGCTCAGTTCCTGGGCTTGCTGTTTCTGCAGC 270
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                                                                                                                                                                              YBMBCYTSTSCGGSSSSSGKGGVTKCGCGGCGSSSINGMBGTSSACSSSSSSSSSSSSSS 877
                                                                                                                                                                                                                     CAGCCTTCTGCGAAGAGCAGGGGTCACTTGGCAGCATCAGCCAGACAGTGGCCCGGCCCGC 448
                                                                                                                                                                                                                                                                                                          GGCCCAGGAGGGGGCTCCTGCCCAGCTCCCCTGCAGCCCCACAATCCCCCTCCAGGATCT 388
                                                                                                                                  TGCCGCCCCGGCCATCCCCTGGCCCCCGGCCGCCTCACCCGGCGGCGC 495
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

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Direct Submission
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61 c 61 g
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/clone_lib="RPCI-98"
/clone="BACR19D16"
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1%; Pred. No. 0.17;
171; Mismatches 126:
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                                                                                                                                                                      Score
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Copyright (c) 1993 - 2002 Compugen Ltd.
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                                                                  23-DEC-1998.
                                                                                                                                                                                                      Homo sapiens
                                                                                                     WO9858059-A1
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## ALIGNMENTS

AAX06756 standard; cDNA; 1468 BP.

XZ
AC AAX06756;

XX
26-APR-1999 (first entry)

XY
26-APR-1999 (first entry)

XX
Lymphocyte activation gene 3 splice variant LAG-3V3 cDNA.

XX
Lymphocyte activation gene 3; LAG-3V3; splice variant;

XW
Lymphocyte activation gene 3; LAG-3V3; splice variant;

XW
Lymphocyte activation; Hashimoto's thyroiditis;

XW
Lymphocyte activation; Hashimoto's thyroiditis;

XW
Lymphocyte activation; LAG-3V3; splice variant;

XW
Lymphocyte activation gene 3; LAG-3V3; splice variant;

XW
Lymphocyte activation gene 3; LAG-3V3; splice variant;

XW
Lymphocyte activation gene 3 splice variant LAG-3V3 cDNA.

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Lymphocyte activation gene 3 splice variant LAG-3V3

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CC This cDNA encodes LAG-3V3 (see AAW88361), a splice variant of human CC lymphocyte activation gene 3 (LAG-3) protein. LAG-3V3 derives from CC cleavage of the nuclear transcript at a different polyA site CC located approximately 170 bp downstream to the 5' end of intron 5. CC The retained intron 5 sequence contains an in-frame stop codon. The CC resulting mRNA encodes a truncated soluble protein which contains CC Dl, D2, D3 and 8 new amino acid residues. LAG-3V2 cDNA was CC Dl, D2, D3 and 8 new amino acid residues. LAG-3V2 cDNA was CC peripheral blood mononuclear cell RNA. The invention provides 3 CC peripheral blood mononuclear cell RNA. The invention provides 3 CC splice variants (see AAW88359-61) of LAG-3 and nucleotide sequences cencoding them (see AAW88359-61) of LAG-3 and nucleotide sequences CC immune-related pathologies (claimed), in particular Th1-dependent CC immune-related pathologies (claimed), in particular Th1-dependent CC diseases such as Hashimoto's thyroiditis, type I diabetes mellitus, compliance rejection, acute graft-versus-host disease, Grave's cophthalmopathy, cerebral malaria, tyme arthritis, reactive arthritis, contact demantitis, unexplained recurrent abortion, aplastic anaemia and CC HeV-induced chronic hepatitis, primary sclerosing colangitis, contact CC demantitis, unexplained recurrent abortion, aplastic anaemia and CC claimed), which can minfo or alter the biological function of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New lymphocyte activation gene 3 (LAG-3) splice variants can be used as immunomodulators
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GCAGCCCCACAATCCCCCTCCAGGATCTCAGCCTTCTGCGAAGAGCAGGGGTCACTTGGC
                                                                                               AGCCAGGGGCTGAGGTCCCGGTGGTGTGGGCCCAGGAGGGGGGCTCCTGCCCAGCTCCCCT
                                                                                                                                                         CTCAGTTCCTGGGCTTGCTGTTTCTGCAGCCGCTTTGGGTGGCTCCAGTGAAGCCTCTCC
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INSERM INST NAT SANTE & RECH MEDICALE.
INST ROUSSY GUSTAVE.
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RESULT 2

AAXO6755

ID AAXO

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AC AAXO

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AC AAXO

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AC AAXO

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DE Huma

XW Lymp

KW Lymp

KW Cere

KW Prim

XW Graf

KW Prim

XW Homo

XW Graf

KW Prim

XW Graf

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XW FT CDS

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                             IAG-3V2 CDNA was obtained by RT-PCR amplification (see AAX06759 and AAX06762) of peripheral blood mononuclear cell RNA. The invention provides 3 splice variants (see AAX06754-56). The IAG-3 and nucleotide sequences encoding them (see AAX06754-56). The IAG-3 variants can be used in, or for the manufacture of, compositions used to treat immune-related pathologies (claimed), in particular Th1-dependent diseases such as Hashimoto's thyroiditis, type I diabetes mellitus, multiple sclerosis, Crohn's disease, rheumatoid arthritis, acute allograft rejection, acute graft-versus-host disease, Grave's ophthalmopathy, cerebral malaria, Lyme arthritis, reactive arthritis, Contact HCV-induced chronic hepatitis, primary sclerosing colangitis, contact
                                                                                                                                                                                                                                                                                                                                                                                                                                   This cDNA encodes LAG-3V2 (see AAW88360), a splice variant of human lymphocyte activation gene 3 (LAG-3) protein. LAG-3V2 lacks exon 6 due to the ligation of the donor site of intron 5 to the acceptor site of intron 6. There is no frame shift. The LAG-3V2 protein is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 24-25; 49pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mastrangeli R,
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dermatitis, unexplained recurrent abortion, aplastic
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Matches 500
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1629 BP; 252 A; 605 C; 452 G; 320 T; 0 other;
                                                                                         mat_peptide
                                                                                                                                                                                                                                                                                                      AAQ12869 standard; cDNA; 1871 BP
            25-JUL-1991
                                       WO9110682-A.
                                                                                                                    sig_peptide
                                                                                                                                                             Homo sapiens
                                                                                                                                                                                         human cytotoxic T-lymphocyte; LAG-3; HIV; CD4; AIDS; ss.
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Similarity 100.0%; Pred. No. 2e-105;
00; Conservative 0; Mismatches 0
                                                                                                                                                                                                                                                 (first entry)
                                                                           /*tag= a
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                                                                                                                                   Location/Qualifiers
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                                                                 LAG-3
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human lymphocyte membrane protein and DNA encoding it (LAG-3) - useful for antibodies and pharmaceutical products used to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1871 BP; 300 A; 671 C; 524 G; 376 T; 0 other;
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CTCACCCGGCGCGCCCTCC 500
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Pred. No. 2e-105;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an ahnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a DNA encoding human lymphocyte activation gene-3 (LAG-3). This small cell lung cancer associated gene is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; lymphocyte activation gene-3; LAG-3; synovial sarcoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encodisolated nucleic acid comprising an NA Group 3 or 4 molecule
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1872 BP; 300 A; 673 C; 523 G; 376 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-457597/49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CANCER RES. (CORR ) CORNELL RES FOUND INC.
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CTCAGTTCCTGGGCTTGCTGTTTCTGCAGCCGCTTTGGGGTGGCTCCAGTGAAGCCTCTCC
                                    CTCAGTTCCTGGGCTTGCTGTTTCTGCAGCCGCTTTGGGTGGCTCCAGTGAAGCCTCTCC
                                                                        TTTTCTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCAGACCATAGGAGAGATGTGGGAGG
                                                                                                                                                                                                                              CTCCCCACCTCTCCCAAGGCCCTCTCCTGCTCCTCCTTCTTCTAGAACCCCTTCCTC
                                                                                                                TTTTCTGACCTCCTTTTGGAGGGCTCAGCCCCAGACCATAGGAGAGATGTGGGAGG
                                                                                                                                                      CACCTCCCTCTCTGCAGAACTTCTCCTTTACCCCCCCACCCCCACCACCACCTGCCCCTTTCC
                                                                                                                                                                                          CACCTCCCTCTCCAGAACTTCTCCTTTACCCCCCACCCCCCACCACTGCCCCCTTTCC 180
                                                                                                                                                                                                                                                                       CCTCCCCACCCTCTCCCAAGGCCCTCTCCTGGTCTCCTTCTTCTAGAACCCCTTCCTC 120
                                                                                                                                                                                                                                                                                                           TCAGGCTGCCTGATCTGCCCAGCTTTCCAGCTTTCCTCTGGATTCCGGCCTCTGGTCATC 60
                                                                                                                                                                                                                                                                                                                                                                                         500;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  small cell lung cancer associated gene, LAG-3.
                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jager D,
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                                                                                                                                                                                                                                                                                                                                                                                                                         DB 22; Length 1872;
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This cDNA encodes LAG-3V1 (see AAW88359), a splice variant of human lymphocyte activation gene 3 (LAG-3) protein. LAG-3V1 is derived from the retention of intron 4, i.e. cleavage at the donor and acceptor sites flanking intron does not occur. An in-frame stop codon located after 8 codons in the retained intron 4 leads to a 36 kDa truncated soluble LAG-3V1 protein containing D1, D2 and 8 new amino acid residues. LAG-3V1 cDNA was obtained by RT-PCR amplification (see AAX06757-58) of peripheral blood mononuclear cell
                                                                                                                                                                                                                                                                                                         (ISTF ) ARS APPLIED RES SYSTEMS HOLDING NV. (INRM ) INSERM INST NAT SANTE & RECH MEDICALE. (INSR ) INST ROUSSY GUSTAVE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 type I diabetes mellitus, multiple sclerosis; Crohn's disease; rheumatoid arthritis; allograft rejection; graft-versus-host disease; Grave's ophthalmopathy; abortion; cerebral malaria; Lyme arthritis; reactive arthritis; hepatitis;
                                                                                                                                                 Claim 1; Page 21-22; 49pp; English.
                                                                                                                                                                                                 New lymphocyte activation gene 3 (LAG-3) splice variants
                                                                                                                                                                                                                                                                              Mastrangeli R,
                                                                                                                                                                                                                                                                                                                                                                              18-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                            03-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gastric antritis;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human lymphocyte activation gene 3 splice variant LAG-3V1 cDNA.
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                                                                                                                                                                                                                                                1999-080953/07.
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                                                                                                                                                                                  as immunomodulators
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                            97EP-0401404.
                                                                                                                                                                                                                                                                                                                                                                                                            98WO-EP03307.
                                                                                                                                                                                                                                                                              Romagnani S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers 297..1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    colangitis; dermatitis; aplastic anaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                                                                                                                                                                                                                  Triebel
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RESULT 6
AAQ12871
ID AAQ1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNA. The invention provides 3 splice variants (see AAW88359-61) of LAG-3 and nucleotide sequences encoding them (see AAX05754-56). The CLAG-3 variants can be used in, or for the manufacture of, pharmaceutical or therapeutic compositions which are used to treat immune-related pathologies (claimed), in particular Thi-dependent diseases such as Hashimoto's thyroiditis, type I diabetes mellitus, multiple sclerosis, Crohn's disease, rheumatoid arthritis, acute allograft rejection, acute graft-versus-bost disease, Grave's ophthalmopathy, cerebral malaria, Lyme arthritis, reactive arthritis, decreating decreating unexplained recurrent abortion, aplastic anaemia and Helicobacter pylori-induced gastric antritis. LAG-3 variants can also be used for the manufacture of immunomodulator compounds (claimed), which can mimic or alter the biological function of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                             human cytotoxic T-lymphocyte; LAG-3S; HIV; CD4; AIDS;
                                                                                                            15-OCT-1991
                                                                                                                                                                          AAQ12871 standard; DNA; 1164
                                                                             Polyhedrin-soluble LAG-3 fusion construct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTCCCTCTCTGCAGAACTTCTCCTTTACCCCCCCACCCCCACCACCACTGCCCCCTTTCC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCCCACCTCTCCCAAGGCCCTCTCCTGGTCTCCTTCTTCTAGAACCCCTTCCTC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCAGTTCCTGGGCTTGCTTTCTGCAGCCGCTTTGGGTGGCTCCAGTGAAGCCTCTCCC
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                                                                                                                                                                                                                                                                                                                                                                                                    GCAGCCCCACAATCCCCCTCCAGGATCTCAGCCTTCTGCGAAGAGCAGGGGTCACTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCCAGGGGCTGAGGTCCCGGTGGTGTGGGCCCAGGAGGGGGGCTCCTGCCCAGCTCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTCTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCAGACCATAGGAGAGATGTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTCCCTCTCTGCAGAACTTCTCCTTTACCCCCCCACCCCCCCACCACTGCCCCCTTTCC
                                                                                                                                                                                                                                                       CTCACCCGGCGCGCCCTCC
                                                                                                                                                                                                                                                                                       CTCACCCGGCGCGCCCCTCC 500
                                                                                                                                                                                                                                                                                                                     AGCATCAGCCAGACAGTGGCCCGCCCGCCGCCGCCGCCCGGCCATCCCCTGGCCCCGGCC
                                                                                                                                                                                                                                                                                                                                                    AGCATCAGCCAGACAGTGGCCCGCCCGCCCGCCCCCGGCCATCCCCTGGCCCCCGGCC
                                                                                                                                                                                                                                                                                                                                                                                      GCAGCCCCACAATCCCCCTCCAGGATCTCAGCCTTCTGCGAAGAGCAGGGGTCACTTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCCAGGGGCTGAGGTCCCGGTGGTGGGCCCAGGAGGGGGCCTCCTGCCCAGCTCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCAGTTCCTGGGCTTGCTGTTTCTGCAGCCGCTTTGGGTGGCTCCAGTGAAGCCTCTCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                           (first entry)
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                                                                                                                                                                          ВÞ
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Pred. No. 2.1e-105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G; 498 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
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ID AAQ1
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RESULT 7
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Best Local S
Matches 291
                                                                                                                                                                                                                                                                                                            FDC cDNA was isolated from a natural cytotoxic lymphocyte cDNA library constructed in lambda gt10. It encodes LAG-3, a membrane-bound protein. A soluble form (LAG-3S) of the protein be produced in insect cells (i.e. Spodoptera frugiperda SF9 cells y removing the transmembrane region-coding sequence. This construct encodes the first 3 extracellular Ig-like domains of LAG-3 (V domain and two C2 domains) fused to a 17 amino acid fragment of the insect protein polyhedrin.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Human lymphocyte membrane protein and DNA encoding it (LAG-3) useful for antibodies and pharmaceutical products used to tree HIV-infected humans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
sig_peptide
                                                                                                                                                                                                                                                                                          Sequence 1164 BP; 182 A; 426 C; 340 G; 216 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-JAN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-JAN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                        Example 11; Page 49-50; 69pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hercend T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (INRM ) INSERM INST NAT SANTE.
(INSR ) INST ROUSSY G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-JUL-1991
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                                                    450
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                                                                                                                    121
                                                                                                                                        330
                                                                                                                                                                                 270
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                                                                                                                                                                                                                                                          Local Similarity
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                             GCTGCCCAGACCATAGGAGAGATGTGGGGAGGCTCAGTTCCTGGGCTTTGCTGTTTCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1991-237986/32.
                                                                        GCTGCCCAGACCATAGGAGAGGTGGGGAGGCTCAGTTCCTGGGCTTGCTGTTTCTGCAG
                                                                                                                    GCCCAGGAGGGGGCTCCTGCCCAGCTCCCCTGCAGCCCCACAATCCCCCCTCCAGGATCTC
                                                                                                                                                                                                                                                58.2%; Score 291; DB 12; ilarity 100.0%; Pred. No. 1.4e-57; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Triebel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90FR-0000126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91WO-FR00009
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106..1161
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LAG-3S fused to polyhedrin fragment
                                                                                                                                                                                                                                                                      Length 1164;
                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                 protein can
SF9 cells)
                                 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                         treat
                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                 Gaps
                                                                                               449
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                                                                                                                    180
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0,

AAQ12870; 15-OCT-1991

(first entry)

AAQ12870 standard;

DNA;

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RESULT 8
AAV07462
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Best Local :
                                                     Domain D1; lymphocyte activating gene 3; LAG-3; reduced affinity; class II molecule; immunomodulator; treatment; autoimmune disease;
                                                                                                                               AAV07462;
                                                                                                                                                 AAV07462 standard; DNA;
    WO9823741-A1
                        Homo sapiens.
                                           graft rejection; anticancer immunotherapy; ss.
                                                                                    DNA encoding the first domain, D1, of the LAG-3 protein.
                                                                                                         01-OCT-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 999 BP; 214 A; 278 C; 302 G; 205 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                     of LAG-3 although no corresponding amino acid sequence is given. See also AAQ12869 and AAQ12871.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence is a suitable promoter for expression of LAG-3. It is also claimed as a DNA sequence which encodes a polypeptide fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 26; Page 48; 69pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human lymphocyte membrane protein and DNA encoding it (LAG-3) - useful for antibodies and pharmaceutical products used to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-JAN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-JUL-1991.
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                                                                                                                                                                                                     947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HIV-infected humans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1991-237986/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hercend T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-JAN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Promoter sequence for LAG-3 expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (INSR ) INST ROUSSY
                                                                                                                                                                                                                                              888
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                                                                                                                                                                                                                                                                                                                               768
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                                                                                                                                                                                                    CCTCCCCACCCTCTCCAAGGCCCTCTCCTGGTCTCCCTTCTTCTAGAACCCCCTTCCTC 120
                                                                                                                                                                                                                         TTTTCTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCAGACCATAGGAGAGATG 233
                                                                                                                                                                                                                                              CACCTCCCTCTGCAGAACTTCTCCTTT-CCCCCCACCCCCACCACCACTGCCCCCTTTCC
                                                                                                                                                                                                                                                                 CACCTCCCTCTCTGCAGAACTTCTCCTTTACCCCCCCACCCCCACCACTGCCCCCTTTCC 180
                                                                                                                                                                                                                                                                                    CCTCCCCACCCTCTCCAAGGCCCTCTCCTGGTCTCCCTTCTTCTAGAACCCCTTCCTC
                                                                                                                                                                                                                                                                                                                               TCAGGCTGCCTGATCTGCCCAGCTTTCCAGCTTTCCTGGATTCCGGCCTCTGGTCATC 827
                                                                                                                                                                                                                                                                                                                                                                                   Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Triebel F;
                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90FR-0000126.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91WO-FR00009.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-lymphocyte; HIV; CD4; AIDS; ss.
                                                                                                                                                                                                                                                                                                                                                                                 44.28;
                                                                                                                                                   447
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                                                                                                                                                                                                                                                                                                                                                                                 Score 221; DB 12; Length 999; Pred. No. 1.5e-41;
                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                        0;
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antiinflammatory; cancer; eye disease; arteriosclerosis; anaemia;
                                                                                                                             ABL33153 standard; DNA; 5689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig 2; 62pp; French.
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                                                                                                                                                                                                                                                                                                                                                                                                                ligands
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                                                                                                                                                                                181
                                                                                                                                                                                                    477
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                                                                                                                                                                                                                                            417
                                                                                                                                                                                                                                                                                      357
                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                           Match 40.8%;
Local Similarity 100.0%;
                                                                                                                                                                                GGCCCTCACCCGGCGCGCGCCCTCC 204
                                                                                                                                                                                                    GGCCCTCACCCGGCGGCGCCCTCC 500
                                                                                                                                                                                                                                                                                                                                                  204;
                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96FR-0014608.
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                                                                                                                             BP.
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Human; immune system disease; cytosine methylation; antiasthmatic; antiarteriosclerotic; antianemic; cytostatic; nootropic; neuroprotective; anti-HIV; anticonvulsant; ophthalmological; antirheumatic; antiarthritic; antidiabetic; antipsoriatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immunomodulators for treating autoimmune disease, for controlling graft rejection and in anticancer immunotherapy (e.g. of leukammia and melanoma), and also to produce antagonists or agonists of the interaction between LAG-3 and Class II major histocompatibility molecules. Cells in which the mutants are exposed at the surface are useful in binding/adhesion assays to study binding to particular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein encoded by lymphocyte activating gene 3 (LAG-3). The sequence is used to create mutants AAW62901-02. The mutants have reduced, or no, affinity for Class II molecules. These mutants are useful as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New mutants of lymphocyte activating gene-3 protein - comprise extracellular domains, having reduced interaction with Class II molecules, useful as immuno-modulator for treating, e.g. auto-immune
                                                                                                                                                                                                                    Human immune system associated gene SEQ ID NO: 1126.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 447 BP; 49 A; 188 C; 152 G; 58 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence encodes the first extracellular domain, D1, of
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(INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
(INSR ) INST ROUSSY GUSTAVE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCAGCATCAGCCAGACAGTGGCCCGCCCGCCCGGCCCCCGGCCATCCCCTGGCCCCC 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCTGCAGCCCCACAATCCCCCTCCAGGATCTCAGCCTTCTGCGAAGAGCAGGGGGTCACT 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCTGCAGCCCCACAATCCCCCTCCAGGATCTCAGCCTTCTGCGAAGAGCAGGGGGTCACT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 204; DB 19; Length 447; Pred. No. 9.9e-38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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RESULT 10
ABL34551/c
ID ABL34
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AC ABL34
AC ABL34
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DT 26-MA
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DE Human
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Best Local S
Matches 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention provides a number of human immune system associated genes which are modified by the methylation of cytosines. The sequences can be used in the diagnosis and treatment of immune system disorders, including eye diseases such as retinopathy, neovascular glaucoma and macular degeneration, arteriosclerosis, anaemia, cancer, acute myeloid leukaemia, Alzheimer's disease, ADDS, epilepsy, neurofibromatosis, rheumatoid arthritis, psoriasis and inflammatoryVulcerative bowel diseases. The present sequence is a gene of the invention.
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01-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 1126; 32pp + Sequence Listing; German.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nucleic acid comprising fragment of chemically modified gene, useful for diagnosis and treatment of diseases associated with abnormal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-JUL-2001; 2001WO-EP07537.
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neurofibromatosis; rheuma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-130909/17
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                           Human metastasis associated gene SEQ
                                                                               26-MAR-2002
                                                                                                                                                                                  ABL34551 standard;
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                                                                                                                                                                                                                                                                                                         TCAGGCTGCCTGATCTGCCCCAGCTTTCCAGCTTTCCTCTGGATTCCGGCCTCTGGTCATC 60
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                                                                                                                                                                                                                                                                                                                                                                                                               TTTTCTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCAGACCATAGGAGAGAGTGTGGGAGG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ds.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000DE-1032529.
2000DE-1043826.
                                                                               (first entry)
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rheumatoid arthritis; psoriasis;
                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40.8%;
81.2%;
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Pred. No. 1.5e
0; Mismatches
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l.5e-37;
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bowel disease;
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Matches 237
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07-APR-2000;
30-JUN-2000;
01-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5689 BP; 1238 A; 120 C; 1590 G; 2741 T;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-APR-2001; 2001WO-EP03970
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Human; immune system disease; cytosine methylation; antiasthmatic;
antiarteriosclerotic; antianaemic; cytostatic; nootropic;
neuroprotective; anti~HIV; anticonvulsant; ophthalmological;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-010922/01.
                                                                                                                                                                                                                                                          ABL33152 standard; DNA; 5689
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                                                                                                     Human immune system associated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            al Similarity
237; Conserv
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; 2000DE-1019173.
; 2000DE-1032529.
; 2000DE-1043826.
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                                                                                                                                                          (first entry)
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                                                                                                                                                                                                                                                             ВP
                                                                                                     gene SEQ ID NO:
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1125

279

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120 511

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180 451

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The present invention provides a number of human metastasis associated genes which are modified by cytosine methylation. The sequences can be used in the diagnosis and treatment of cancer. The present sequence is one of the genes of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                             New nucleic acid derived from chemically treated metastasis genes, useful for diagnosis of cancers by analysis of cytosine methylation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cytostatic;
ds.
                                             Score 204; DB 24; Length 5689; Pred. No. 1.5e-37; O; Mismatches 55; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene therapy;
                                                                                                                                                            0 other;
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RESULT 12
ABL34550
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                                                                                                                                                                                                                                                                                                                                                                                                        5240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; SEQ ID NO 1125; 32pp + Sequence Listing; German.
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01-SEP-2000;
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  26-MAR-2002
                                                                                               ABL34550
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                                                                                                                                                                                                              TTTAGTTTTTGGGTTTGTTGTTTTTGTAGTCGTTTTTGGGTGGTTTTAGGTAA 5411
                                                                                                                                                                                                                                                               CTCAGTTCCTGGGCTTGCTGTTTCTGCAGCCGCTTTGGGTGGCTCCAGTGAA 292
                                                                                                                                                                                                                                                                                                                                        TTTTCTGACCTCCTTTTGGAGGGCTCAGCGCTGCCCAGACCATAGGAGAGATGTGGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGGCTGCCTGATCTGCCCAGCTTTCCAGCTTTCCTCTGGATTCCGGCCTCTGGTCATC 60
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                                                                                                                                                                                                                                                                                                                                                                                                        CACCTCCCTCTCTGCAGAACTTCTCCTTTACCCCCCACCCCCACCACTGCCCCCTTTCC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTCCCCACCCTCTCCCAAGGCCCTCTCCTGGTCTCCCTTCTTCTAGAACCCCTTCCTC 120
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                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000DE-1032529.
2000DE-1043826.
(first entry)
                                                                                               DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21.3%;
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                                                                                               BP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 5689;
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Qy DЬ Ş

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XXXXX

Human; chromosome mapping; gene mapping; gene therapy;

forensic;

Qy

Qy

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07-APR-2000;
30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   useful to
also for
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                                                                                                                                                                                                                                            5240
                                                                                                                                                                                                                                                                                         5180
                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention provides a number of human metastasis associated genes which are modified by cytosine methylation. The sequences can be used in the diagnosis and treatment of cancer. The present sequence is one of the genes of the invention.
                                                                                                                                                                                                                                                                                                                                    5120 TTAGGTTGATTTGTTTAGTTTTTTAGTTTTTTTGGATTTCGGTTTTTGGTTATT 5179
                                                                                         AAS85793 standard;
                                                                                                                                                  5360 TTTAGTTTTTGGGTTTGTTGTTTTTGTAGTCGTTTTTGGGTGGTTTTAGGTAA 5411
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5689 BP; 1151 A; 120 C; 1710 G; 2708 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; SEQ ID NO 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New nucleic acid derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-010922/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metastasis associated cytosine methylation;
                                            13-FEB-2002
                                                                   AAS85793;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human metastasis associated gene
                                                                                                                                                                        241 CTCAGTTCCTGGGCTTGCTGTTTCTGCAGCCGCTTTGGGTGGCTCCAGTGAA 292
                                                                                                                                                                                                                                                                   121
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                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                          1 TCAGGCTGCCTGATCTGCCCAGCTTTCCAGCTTTCCTCTGGATTCCGGCCTCTGGTCATC 60
                                                                                                                                                                                                                                                                 CCTCCCACCCTCTCCAAGGCCCTCTCCTGGTCTCCCCTTCTTAGAACCCCTTCCTC 120
                                                                                                                                                                                                                                            TTTTTTGATTTTTTTTGGAGGGTTTAGCGTTGTTTAGATTATAGGAGAGATGTGGGAGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; 2000DE-1019173.
; 2000DE-1032529.
; 2000DE-1043826.
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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                      novel
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                                            (first entry)
                    human diagnostic protein #21597.
                                                                                         CDNA; 3267
                                                                                                                                                                                                                                                                                                                                                                                            21.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d from chemically treated metastasis genes, cancers by analysis of cytosine methylation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Berlin
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                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                         Score 106.4;
                                                                                                                                                                                                                                                                                                                                                                                               Pred.
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                                                                                                                                                                                                                                                                                                                                                                                               No. 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene therapy; cancer;
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                                                                                                                                                                                                                                                                                                                                                                                                         DB 24;
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                                                                                                                                                                                                                                                                                                                                                                                                         Length 5689;
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RESULT 14
AAS86048
ID AAS86
XX
AC AAS86
XX
DT 13-F1
XX
DE DNA 6
                                                                                                                                                                                                                                                                                                                CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CC dentifying expressed genes (I) is useful in gene therapy techniques CC for identifying expressed genes. (I) is useful in gene therapy techniques CC (II). (II) is useful for generating antibodies against it, detecting or CC (II). (II) is useful for generating antibodies against it, detecting or CC (II). (II) and its binding partners are useful in medical configuration of sites expressing (II). (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. CC diagnostics, forensics, gene mapping, identification of mutations in CC consible for genetic disorders or other treats to assess biodiversity and its products dequences of data and products dependent on DNA and CC and to produce other types of data and products dependent on DNA and CC anino acid sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of the invention.

CC contest The sequence data for this patent did not appear in the printed CC specification, but was obtained in electronic format directly from WIPO at the polymonint/pub/published_pct_sequences.
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23-AUG-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to isolated polynucleotide (I) and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    food supplement;
                                                                                                                                         2190
                                                                                                                                                                                         2250 CCGCCCAGTGGCCCGCCCGCCCCCGGCCATCCCCTGGCCCCCGGCCCTCACCCG 2191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptide (II) sequences.
                                                                                                                                                                                                                                                                                          Sequence 3267 BP; 572 A; 914 C; 970 G; 811 T; 0
 DNA encoding novel human diagnostic protein #21852
                          13-FEB-2002
                                                  AAS86048;
                                                                          AAS86048 standard; cDNA; 5912
                                                                                                                                                                 489
                                                                                                                                                                                                                  429 CCAGACAGTGGCCCGCCCGCCCGGCCCCGGCCCATCCCCTGGCCCCCGGCCCTCACCCG 488
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DB; ABG21606.
                                                                                                                                        GCGGCGCCCTCC 2179
                                                                                                                                                                 GCGGCGCCCTCC 500
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                                                                                                                                                                                                                                                         Similarity
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                                                                                                                                                                                                                                            Conservative
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2000US-0649167.
                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                      13.4%;
95.8%;
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                                                                                                                                                                                                                                            Score 67.2; D
Pred. No. 3e-0
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (I) is useful as hybridisation probes
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                                                                                                                                                                                                                                                        3e-06;
                                                                                                                                                                                                                                                                     DB 23; Length 3267;
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RESULT 15
AAZ17263
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Best Local
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food supplement; medical imaging; diagnostic; genetic disorder; ss.
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23-AUG-2000; 2000US-0649167
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1018 CCGCCCAGTGGCCCGCCTGCCGCCCCGGCCATCCCCTGGCCCCCGGCCCTCACCCG 1077
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                                                                                                                                                                                                                                                                                                                                                                           1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 5912 BP; 1540 A; 1587 C; 1551 G; 1234 T; 0 other:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  at ftp.wipo.int/pub/published_pct_sequences
AAZ17263;
                                                                                                        AAZ17263 standard; cDNA; 1337 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               489 GCGGCGCCCTCC 500
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                                                                                                                                                                                                                                                                                                                                                                           GCGGCGCCCTCC 1089
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69; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13.4%;
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Pred. No. 3.
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12-OCT-1999

(first entry)

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                                                                                                                                                                                                                                                                                    The present invention describes a library of human polynucleotides CC comprising the sequences given in AAZI2532 to AAZI779. Also described is CC a method of detecting differentially expressed genes correlated with the CC cancerous state of a mammalian cell, comprising detecting at least one CC differentially expressed gene product in a test sample from a cell cuspected of being cancerous, where the gene product is encoded by one CC plynucleotides can be used as a source of primers and probes, which can be used for a variety of purpose, e.g. detection of expression levels, CC mapping, tissue typing or profiling, forensics, genetic analysis and CC detection of polymorphisms. Polypeptides encoded by the polynucleotides can be used for raising antibodies for expression levels, can be used for raising antibodies for experimental, diagnostic and CC therapeutic purposes. The polynucleotides may also be used to construct arrays for diagnostics (which may be used to determine function of an CC encoded protein); and to detect differences in expression levels between two cells (e.g. to identify abnormal or diseased tissue in a human, to CC identify a genetic predisposition or susceptibility to a disease such as CC cancer). The polynucleotides of the invention are especially used in the CC diagnosis, prognosis and management of colorectal cancer, breast cancer, and antarchists
                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-APR-1998;
28-JAN-1998;
24-FEB-1998;
31-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Crkvenjakov R, Dickson M, Drmanac R, Drmanac S;
Escobedo J, Garcia PD, Garcia V, K, Innis MA;
Jones WL, Kassam A, Kennedy GC, Kita D, Labat I;
Lamson G, Leshkowitz D, Pot D, Randazzo F, Reinhard
Stache-Crain B, Sudduth-Klinger J, Williams LT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; gene; gene expression product; diagnosis; therapy; probe; detection; mapping; tissue typing; profiling; forensic; cancer; genetic analysis; colorectal cancer; breast cancer; lung cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 2250-2251; 2479pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel human genes and their expression products which are differentially expressed in different cell types
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                                                                                                                                                                                                                                   Sequence 1337 BP; 42 A; 577 C; 27 G; 22 T; 669 other;
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                                                                                                                                                                                                                                                                           peptide analogues
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-JAN-1999;
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                                                                              592
62
                                                                                                                                                                          Match 10.0%;
Local Similarity 26.5%;
                                                                                                                 2 CAGGCTGCCTGATCTGCCCAGCTTTCCAGCTTTCCTCTGGATTCCGGCCTCTGGTCATCC 61
                     CTCCCCACCCTCTCCCAAGGCCCTCTCCTGGTCTCCCTTCTTCTAGAACCCCTTCCTCC 121
                                                                           Conservative
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98US-0080114.
98US-0080515.
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                                                                                                                                                                          Score 49.8; DB Pred. No. 0.025;
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1072 CNNCNCNCNNCCNNCC 1090
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                                                    GCATCAGCCAGACAGTGGCCCGCCCGCCTGCCCGCCCCGGCCATCCCCTGGCCCCCGGCCC 481
                                                                                                            GCCAGGGGCTGAGGTCCCGGTGGTGTGGGCCCAGGAGGGGGCTCCTGCCCAGCTCCCCTG
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Search completed: October 10, 2002, 15:17:48
Job time: 102 secs

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; Sequence 2
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                                                     Query Match
Best Local S
Matches 170
                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Silva, Robin M.
REGISTRATION NUMBER: 38,304
REFERENCE/DOCKET NUMBER: A-65
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEPHONE: (415) 949-8711
INFORMATION FOR SEG ID NO: 2:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Lao, Ying
APPLICANT: Hiang, Betty
APPLICANT: Hiang, Don
TITLE OF INVENTION: Mammalian Protein Interaction Cloning
TITLE OF INVENTION: System
TITLE OF SECUENCES: 5
                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: unknown
TOPOLOGY: unknown
MOLEOUT
                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Flehr, Hohbach, Test, Albritton & Herbert STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: CA
COUNTRY: USA
ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC COMPAtible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA Release #1.0.
CURRENT APPLICATION LOMBER: US/09/050,88
PPLICATION LOMBER: US/09/050,88
FILING DATE: 30-MAR-1998
131 GCCCAGATAGACGCCCCGGCCCCCGGGTCCTGGAGTCCCGCCGCCTGCTGCCCGGCCG 190
                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2, fr.
40. 6114111
                                                                    Similarity
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                                                       Conservative
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943785
84403765
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4 US-09-165-264-1
4 US-09-165-264-1
4 US-09-165-264-1
2 US-09-165-264-1
3 US-09-103-840A-2
1 US-09-103-840A-2
1 US-09-103-840A-2
4 US-09-103-840A-1
4 US-09-103-840A-1
7 US-09-103-840A-1
7 US-09-103-840A-1
8 US-09-103-840A-1
9 US-08-318-837-1
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9 US-08-146-930-1
9 US-08-458-240-1
9 US-09-263-0393-1
9 US-09-263-0393-1
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                                                                  Score 60; DB 3;
Pred. No. 0.00034;
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                                                       Mismatches 165; Indels
                                                                                 Length 2580;
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Sequence 14, Appli
Sequence 18, Appli
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Sequence 2, Appli
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Sequence 1, Appli
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Sequence
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Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Issued\_Patents\_NA:\*
1: /cgn2\_6/ptodata/2,
2: /cgn2\_6/ptodata/2,
3: /cgn2\_6/ptodata/2,
4: /cgn2\_6/ptodata/2,
5: /cgn2\_6/ptodata/2,
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/cgn2\_6/ptodata/2/ina/FCPUS\_COMB.seq:\*
/cgn2\_6/ptodata/2/ina/Dackfiles1.seq:\*

Result

Match Length

DВ

Description

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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2580 5452 5452 5452 5452 510596

Sequence : Sequence :

8, Appli

2, Appli 1, Appli 1, Appli 1, Appli 15, Appl 15, Appl

57.2 52.2 50 49.2 49.2 49.2 49.2 49.4 48.8 48.4

4

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Sequence Sequence Sequence

e 1, Appli 14, Appli 7, Appli 7, Appli 7, Appli 11, Appl

446.66

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Minimum DB seq length: 0
Maximum DB seq length: 200000000

Total number of hits satisfying chosen parameters:

383533 seqs, 122816752 residues

Title: Perfect score:

US-09-489-101A-13\_COPY\_1\_500 500

1 gcccgaaacccggaagtgag.....gcgactttgctcaggactcc

Scoring table: Sequence:

IDENTITY\_NUC
Gapop 10.0 , Gapext 1.0

OM nucleic -

nucleic search, using sw model

GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd

october 10, 2002, 12:39:37 (Search time 18.733 Seconds (Without alignments) 6556.054 Million cell updates,

cell updates/sec

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US-09-359-081-2
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US-09-359-081-2/c
US-09-359-081-2/c
; Sequence 2, Application US/09359081
; Patent No. 6316223
; GENERAL INFORMATION:
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                                                                                                                                                                 NAME: Silva, Robin M.

REGISTRATION NUMBER: 38,304

REFERENCE/DOCKET NUMBER: A-65638/DJB/RMS

TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989

TELEPHONE: (415) 949-8711

INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 2580 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
TYPE: nucleic acid
TRANDEDNESS: unknown
  Matches 170;
                                            Query Match
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Local Similarity 50.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94111-4187
COMPUTER READABLE FORM:
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/09/359,081
FILING DATE: 22-Jul-1999
CLASSIFICATION: CUnknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: UD/NOWN>
APPLICATION NUMBER: UD/NOWN>
ATTORNEY/AGENT INFORMATION:
                                                                                                                            TOPOLOGY: unknown
MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
CORRESPONDENCE Holbach, Test, Albritton & Herbert
ADDRESSE: Flehr, Holbach, Test, Albritton & Herbert
STREET: 4 Embarcadero Center, Suite 3400
                                                                                                           SEQUENCE DESCRIPTION: SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Mammalian Protein Interaction Cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCGCAGCATGAACCCCCGCCGGCGGGCAGCCTCCTGTACAGCCCGGCCGCCCCTGCAGAG 310
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CITY: San Francisco
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    Conservative
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Hiang, Betty
Hiang, Don
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                 Score 60; DB 4; Length 2580; Pred. No. 0.00034;
Mismatches 165; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: CONTIEK, Robert A.
APPLICANT: Damaj, Bassam B.
APPLICANT: Robbins, Alan K.
TITLE OF INVENTION: Eukaryotic Cells Stably Expressing Genes
TITLE OF INVENTION: From Multiple Transfected Episomes
FILE REFERENCE: 0867/LD903US1
CURRENT FILING DATE: 1998-08-06
RUMBER OF SEQ ID NOS: 36
SOFTWARE: FILING DATE: 1998-08-06
SOFTWARE: FSSTSEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 5452
TYPET. NOM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/09130114 Patent No. 5976807
                                                                                                                                                                                                                                                                                                                                                                               Matches 170;
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: VEBNA
                                                                                                                                                                                                                                                                                                                  2084 CCTCCTGCTCCTGCCCCCTCCTGCTCCTGCCCCT 2119
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                               430 ACACCAGCTATGCCCCGGGGGCCACCGCCTCCAGCT 465
                                                                                                                                                                                                                                                                                  191 AGGACCCCACCCCGCCTGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTA 250
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                                                                                                                                                                                          CCCGCAGCATGAACCCCCGCCGGCGGCAGCCTCCTGTACAGCCCGCCGCCCCTGCAGAG 310
                                                            CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT 369
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Pred. No. 0.00035
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US-08-910-647-1/c
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Patent No. 6251433
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
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SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
TENGTH: 9600 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: FUJILA, Sharon M.
REGISTRATION NUMBER: 38,459
REFERENCE/DOCKET NUMBER: 1218.002
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/910,647
                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Compositions and Methods for TITLE OF INVENTION: Polynucleotide Delivery NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
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                             430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
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OPERATING SYSTEM: PC-DOS/MS-DOS
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STATE: California
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Local Similarity 50.6%;
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4560 Horton Street
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Pred. No. 0.00036;
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RESULT 5

US-07-885-971-15/c

RESULT 6

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; Sequence 15, Application US/07884811
; Patent No. 5316921
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 10596 bases
TYPE: NUCLEIC ACID
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Dreger, Ginger R.
REGISTRATION NUMBER: 33,055
REFERENCE/DOCKET NUMBER: 755
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-3216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: UFILING DATE: 19920518 CLASSIFICATION: 530 PRIOR APPLICATION DATA:
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MEDIUM TYPE: 5.25 inch, 360 kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patin (Genentech)
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                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA
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2301 CCTCCTGCTCCTGCCCCCTCCTGCTCCTGCCCCT 2266
                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                      131 GCCCAGATAGACGCCCCGGCCCCCGGGTCCTGGAGTCCCGCCGCCTGCTGCCCGGCCG 190
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                                  430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
                                                                                                               311 CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT 369
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CITY: South San Francisco
STATE: California
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Similarity 50.6%;
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08-08-087-783A-15/c ; Sequence 15, Application 08/08087783A
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Best Local :
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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GENERAL INFORMATION:
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TELECOMMUNICATION INFORMATION: 415/225-3216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: HEPATOCYTE GROWTH FACTOR PROTEASE DOMAIN VARIANTS NUMBER OF SEQUENCES: 21
                                                                                     2301 CCTCCTGCTGCTGCCTCCTGCTGCTGCCCT 2266
                                                                                                                                                        2541 GCCCCTCCTGCCCCTCCTGCCCCTGCCCCTGCCCCTGCTCCTGCCTGCCCCCT 2482
                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 in
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                                                                                                                      430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            311 CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT 369
                                                                                                                                                                                                                                                                                                                          251 CCCGCAGCATGAACCCCCGGCGGGGGGGCAGCCTCCTGTACAGCCCGGCCGCCCCTGCAGAG 310
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STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: UFILING DATE: 19920518
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Dreger, Ginger R. REGISTRATION NUMBER: 33,055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
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Pred. No. 0.00037;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 15:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/884
FILING DATE: 18-MAY-92
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/885
FILING DATE: 18-MAY-92
ATTORNEY/AGENT INFORMATION:
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LENGTH: 10596 base pairs
TYPE: Nucleic Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: MAISCHANG, Diane L.
NAME: MAISCHANG, Diane L.
REGISTRATION NUMBER: 90
REFERENCE/DOCKET NUMBER: PO
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-5416
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NUMBER OF SEQUENCES: 22
2301 CCTCCTGCTCCTGCCTCCTGCTCCTGCCCCT 2266
                                                                  CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
                                                                                                 311 CGCCATGCTGC - ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTTGCCTTCT 369
                                                                                                                                                                                                                                                                                                      191 AGGACCCCACCCCGCCTGCCGGCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTA 250
                                                                                                                                                                                                                                                                                                                                                                           131 GCCCAGATAGACGCCCCGGCCGCCGGGTCCTGGAGTCCCGCCGCCTGCTGCCCGGCCG 190
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CITY: South San Francisco
STATE: California
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TELEX: 910/371-7168
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                                                                                                                                                                                                                                       CCCGCAGCATGAACCCCCGCCGGCGGGCAGCCTCCTGTACAGCCCGCCGCCCCTGCAGAG 310
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                 RESULT 9
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   US-08-194-087-15/c
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Best Local Similarity
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APPLICANT: GODOWS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: GODOWSKI, Paul J. Lokker, Nathalie A. Mark, Melanie R. TITLE OF INVENTION: SINGLE-CHAIN HEPATOCYTE GROWTH FACTOR VARIANTS NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 10596 bases
TYPE: nucleic acid
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TELEPHONE: 415/225-2614
TELEFAX: 415/952-9881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 18-MAY-1992
ATTORNEY/AGENT INFORMATION:
NAME: Gallegos, R. Thoma:
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CURRENT APPLICATION DATA:
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                                                                                                                            2301 CCTCCTGCTCCTGCCCCCTCCTGCTCCTGCCCCT 2266
                                                                                                                                                                                                                                                       430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
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TELEX: 910/371-7168
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T: 460 Point San Bruno Blvd
South San Francisco
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               PCT-US93-04648-15/c
                               RESULT 10
                                                                               2301 CCTCCTGCTCCTGCCCCCTCCTGCTCCTGCCCCT 2266
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INFORMATION FOR SEQ ID NO:
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PRIOR APPLICATION DATA:
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                                                  TELECOMMUNICATION INFORMATION:
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                                                                       311 CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCCGCCGCCATACCCCTGCCTTCT 369
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CITY: S
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REGISTRATION NUMBER: 33,055
REFERENCE/DOCKET NUMBER: 77
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South San Francisco
California
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RESULT 11
US-09-128-155-16
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Best Local Similarity 50.6%;
Matches 170; Conservative
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
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NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
ADDRESSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 10596 bases
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FILING DATE: 18-MAY-92
ATTORNEY/AGENT INFORMATION:
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CURRENT APPLICATION DATA:
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TELECOMMUNICATION INFORMATION:
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                                                                    2301 CCTCCTGCTCCTGCCCCTCCTGCTCCTGCCCCT 2266
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                                                                                                                                                                              430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
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CITY: South San Francisco
STATE: Callifornia
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                                                                                                                                            CGCCATGCTGC-ACTGCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT 369
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US-09-165-264-8/c
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APPLICANT: Pan, Yang
TITLE OF INVENTION: MOVEL MOLECULES OF TANGO-77 RELATED PROTEIN FAMILY
TITLE OF INVENTION: AND USES THEREOF
FILE REFERENCE: 09404/052001
CURRENT APPLICATION NUMBER: US/09/128,155
CURRENT FILLING DATE: 1998-08-03
EARLIER APPLICATION NUMBER: US 60/091,650
EARLIER APPLICATION NUMBER: US 60/094,646
EARLIER FILLING DATE: 1998-07-02
EARLIER FILLING DATE: 1997-08-04
                                                                                                  Sequence 8, Application US/09165264
Patent No. 6197510
GENERAL INFORMATION:
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SOFTWARE: FastSEQ for Windows Version 3.0
                                                    APPLICANT: Vinayagamoorthy, Thuradayah
TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747
                CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
                                                  FILE REFERENCE:
NUMBER OF SEQ ID NOS:
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LOCATION: (1)...(152331)
OTHER INFORMATION: n = A,T,C or G
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                                                                                                                                                                                                                                                                                                                                                                                                              290 CAGCCCGCCGCCCTGCAGAGCGCCATGCTGCACTGCCCCTACTGGAACACCTTCTCGCT 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50 GGCGCCGCGGCCCCGGCCCGGCCCGGCCCGAGATCATGATGCTGCCGCCACC 109
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                                                                                                                                                                                                                                                                                                                                            CGGCAGCCAGCCCTGCCCAGACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCTTGCC
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Gaps

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US-09-165-264-13/c
; Sequence 13, Application US/09165264
; Patent No. 6197510
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                                                                                                                                                                                                                                ; OTHER INFORMATION: Description of Artificial Sequence:Primer US-09-165-264-13
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; OTHER INFORMATION: Description of Artificial Sequence:Primer sequence
US-09-165-264-8
                                                                                                                                                                      Query Match 10.0%;
Best Local Similarity 47.5%;
Matches 149; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION: APPLICANT: Vinayag
                                                                                                                                                                                                                                                                                                                    SOFTWARE:
SEQ ID NO 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 8
LENGTH: 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 147;
                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
CURRENT SEQ ID NOS: 14
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Vinayagamoorthy, Thuraiayah
TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747
                                                                                                                                                                                                                                                            LENGTH: 320
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Artificial Sequence
        199
                                                             259
                                                                                                                              148 GGCGGCCCGGGTCCTGGAGTCCCGCCCGCCTGCCTGGCCGGGCCGAGGACCCCACCCCGCCT 207
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        157 GGGTCCTGGAGTCCCGCCGGCCTGCTGCCCGGCCGAGGGACCCCACCCCGCCTGCCGCCCGA 216
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CGCCGGCGGCAGCCTCCTGTACAGCCCGCCCGCCCCTGCAGAGCGCCATGCTGCACTGCC 327
                                                      GCCGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTACCCGCAGCATGAACCCC
                                                                                                              CCGCCTCCTTCCTCGGCAGCCCAGCCCTGCCCAGACACCCAGCTATGCCCCCGTGGCCACCG 456
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Pred. No. 0.011;
0; Mismatches 158; Indels
                                                                                                                                                                        Mismatches
                                                                                                                                                                     165; Indels
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US-08-718-388-5/c
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                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                  Matches
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APPLICANT: MORIKA
APPLICANT: HARADA
                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (703) 205-80:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                   114 CCACCACGGAGCGAGAAGCCCCAGATAGACGCCCCGGGCGCCCCGGGTCCTGGAGTCCCGC 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                54 CCGCGGGCTCCGCCCCGGCCCGGACCCGGGCCCGAGATCATGATGCTGCCGCCACCGCCG 113
                                                                                                                                                                                                                                                                                                      STRANDEDNESS: SIL
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                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: MURPHY JR, GERALD M
REGISTRATION NUMBER: 28,977
REFERENCE/DOCKET NUMBER: 02
                                                                                                                                                                                                                                                                                                                                         TYPE:
                                                                                                                                                                                                                                                                                                                                                      LENGTH: 3661 base pairs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: FALLS CHURCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19
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                                                         CGCCTGCTGCCCGGCCGAGGACCCCCACCCCGCCGCCCGATGCTTGCAGTGGGGCCC
                               CCGCAGGCGTCCGGGCCGCCGAAGGACTCTTGCTGCTCTGGGGTGCACGGCGACGGCAT 2626
                                                                                        TGCGCGGGCGCACAAGGCCGTGGCAGGGCGCCAGCGGGCCGTCGGTGGCGAGATCACG 2686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCATGAGCTCCGCCTCCTTCCTCGGCAGCCAGCCTGCCCAGACACCAGCTATGCCCCCG 447
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                                                                                                                                                                                                                  al Similarity
168; Conserv
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                                                                                                                                                                                                                                                                                                                                      nucleic acid
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PO BOX 747
                                                                                                                                                                                                                                                                                                                                                                                                 (703) 205-8050
                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                  (703) 205-8000
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                                                                                                                                                                                                                                                                                                                        single
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                                                                                                                                                                                                               Score 49.2; DB 4; Length 3661; Pred. No. 0.049; 0; Mismatches 198; Indels 0
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US-08-718-388-6/c
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                                                                                                                                                                                                             ; NAME/KEY:
; LOCATION:
US-08-718-388-6
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                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 0230
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 205-8050
TELEPAX: (703) 205-8050
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 6, Application US/08718388 Patent No. 6271362 GENERAL INFORMATION:
                                                                                                                                      Query Match 9.8%;
Best Local Similarity 45.9%;
Matches 168; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/718,388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: MORIKAWA, MINORU APPLICANT: HARADA, NAOKI TITLE OF INVENTION: GENE ENCITE OF INVENTION: PROTEIN
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: BIRCH, STEWART, KOLASCH AND BIRCH
STREET: PO BOX 747
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                                                                     CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: MURCHY JR, GERALD M
REGISTRATION NUMBER: 28,977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
6880 TGCGCGGCGCACAAGGCCGTGGCAGGGCCGCCAGCGGGCCGTCGGTGGCGGAGATCACG 6821
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                      114 CCACCACGGAGCGAGAAAGCCCAGATAGACGCCCCGGGGCCCCGGGGTCCTGGAGTCCCGC 173
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                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                               COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
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                                                                                                                                           Score 49.2; DB 4;
pred. No. 0.052;
0; Mismatches 198;
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Search completed: October 10, 2002, 19:27:34 Job time: 104.733 secs
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                                                                                           AGCCAG 419
                                                                                                                                                       CCGCCCACCGCCTTCAGGTCGTCTGCGGGGTCCTGGTTGTAGTTCCCGCATAAGCCACAG
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                                                               AGCGAG 6575
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Result
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Maximum Match 100%
Listing first 45 s
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Maximum DB seg length: 2000000000
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Perfect score:
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                   0000
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  116.2
1112.8
1112.8
109.6
179.4
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396.2
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121
                                                                                                                                                                     Score
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Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                    987654321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13736207 seqs, 6748477542 residues
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  EST:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                              gb_est2:*
gb_htc:*
gb_gss:*
em_gss_hum:*
                                                                                                                                                                                                                                                                                                                    gb_est1:*
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em_gss_pln:*
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  635
131
2658
635
776
612
274
834
848
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   10
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12
12
9
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                                    AL543262
BI149078
AA948370
BI416657
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                                                                                 BE952238
BE242275
BC019206
AG084012
   AL579455
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BE241632
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          CNS02YYE
                     BI416695
                                                                          CNS010RY
                              AG030581
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                                    BC019206 Mus muscu
AG084012 Pan trog1
AL09935 Drosophil
AL543262 AL543262
BI149078 602910755
AA948370 0946f04.s
BI416657 hasp001xm
                                                                                                            BE241632 TCAAP1E06
BE409724 601301584
BB664186 BB664186
BE952238 UI-M-CD0-
         BI416657 hasp001xm
AG030581 Pan trog1
BI416695 hasp001xo
AL220271 Tetraodon
                                                                                                                                                                   Description
  AL579455 AL579455
                                                                                                     BE242275 TCAAPIE15
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BM148224
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AUTHORS
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                                                                                                                                                                                               COMMENT
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69.60
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70.4
70.2
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 483)

Nei,Y., Tsang,Y.T.M., Mei,G., Ku,J.M., Ali-Osman,F.R. Jr.,
Gunarathe,P.H., Muzny,D., Bouck,J., Gibbs,R.A. and Margolin,J.F.
Pediatric Leukemia cDNA Sequencing Project (2001)
                                                                                                                                                         Unpublished (2001)
Contact: Dr. Judith F. Margolin
Texas Children's Cancer Center and Human Genome
at Baylor College of Medicine
1102 Bates, MC3-3320 Houston, TX 77030, USA
Tel: 832-824-4536
                                                                                                                                                                                                                                                                                                                           BM148224
483 bp mRNA linear EST 30-NOV-2001 TCAAP1Q9825 Pediatric acute myelogenous leukemia cell (FAB M1) Baylor-HGSC project=TCAA Homo sapiens cDNA clone TCAAP9825, mRNA
                                                                                                                                                                                                                                                                                         BM148224.1 GI:17168744
EST.
                                                                                                                                                  Fax: 832-825-4038
                                                                                                                                                                                                                                                                                                                    sequence.
                                                                                                                               primer: M13 primer
                                                                                                                                                                                                                                                                                                                                                                                                                         clones@txccc.org
                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/db_orapesps"
/clone="ToAAP9855"
/clone_lib="Pediatric acute myelogenous leukemia cell (FAB M1) Baylor_HGSC project=TCAA"
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/cell_type="myeloid cell"
/dev_stage="pediatric 6 years"
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/note="Vector: lambda pSB; Site_1: BamHI; Site_2: EcoRI;
First strand cDNA was primed with an anchored
                                                       /sex="male"
                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            831
1080
821
1128
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1101
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925
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BG786364
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BG786316
BG78631991
CNG0128304
CNG0128304
CNG0159F
BG809598
BG809598
BG809582
BG809474
BG893474
BG893474
BG893474
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AGI23077
AZ.183795
AGD43036
AGI26228
AZ185303
AGI32157
AG060559
AQ742453
ALSB1447
CNS0091P
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AG060267
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AZ183795 SP_1002_A
AG043036 Pan trogl
AG12628 Pan trogl
AG12628 Pan trogl
AG132157 Pan trogl
AG660559 Pan trogl
AG660559 Pan trogl
AG742453 HS_5383_B
AL581447 AL581447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AQ893056 HS_4832_A
AQ893474 HS_4832_A
BM477735 AGENCOURT
AI357868 qy13b02_x
BG441241 GA_Ea001
AL664031 Drosophil
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BG809598
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AL053013

Drosophil

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DEFINITION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     261 GAACCCCCGCCGGCGGCAGCCTCCTGTACAGCCCGCCGCCGCCCTGCAGAGCGCCATGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                381 CGCCCGTTCATGAGCTCCGCCTCCTTCCTCGGCAGCCCAGCCCTGCCCAGACACCAGCTAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCTCCAGCGACAGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACGCCCCGGCGGCCCGGGTCCTGGAGTCCCGCCGGCCTGCTGCCCGGCCGAGGACCCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGGCAGCTGCGAGGGTCGGAGAAACAGGCGCCGCGGGCTCCGCGCCCGGCCCGGACCCG 61
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                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 402)

Wei,Y., Tsang,Y.T.M., Mei,G., Ku,J.M., Ali-Osman Jr.,F.R., Muzny, Bouck,J., Gibbs,R.A. and Margolin,J.F.

Pediatric Leukemia cDNA Sequencing Project
                         Unpublished (2000)
Contact: Dr. Judith F. Margolin
                                                                                                                                                                                                                                                                                                                             BE241632
402 bp mRNA linear EST 03-TCAAP1E0685 Pediatric acute myelogenous leukemia cell (FAB Baylor-HGSC project=TCAA Homo sapiens cDNA clone TCAAP0685,
                                                                                                                                                                                                Homo sapiens
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Children's Cancer Center and Human Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   XhoI-oligo(dT) primer [5'GGAGGACTCGAGCGCCGCAGGAGGAG(T) YN 3'; V=A,C,G; N=A,C,G,T] and then dG tailed. Second strand was primed with a BamHl-dC primer [5'AGAGAGCTCGGATCCGCGCGCAATAATAATCC] 3'].
Double-stranded cDNA was then digested with BamHl and XhoI and directionally cloned into the BamHl and SalI sites of lambda pSB vector. Library went through one round of normalization. Library was constructed by Wei Yu at RIKEN of Japan (Carninci P, Westover A, Nishiyama Y, Ohsumi T, Itoh M, Nagaoka S, SasakiN, Okazaki Y, Muramatsu M, Schneider C, Hayashizaki Y, High efficiency selection of full-length cDNA by improved biotinylated cap trapper., 71 a 208 c 137 g 67 t
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Pred. No. 2.6e-67;
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cell (FAB M1)
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В ρy В Ş В ρy ORIGIN

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VERSION KEYWORDS

ACCESSION

SOURCE

COMMENT

BE409724

TITLE AUTHORS

JOURNAL

REFERENCE

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28 AGCTGCGAGGCTCGGAGAAACAGGCGCCCGCGGGCTCCGGCCCGGCCCGGACCCCGGGCCCG
                                                         TCATGAGCTCCGCCTCCTTCCTCGGCAGCCAGCCCTGCCCA 402
                                                                                                                                                                                       CCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCTCCAGCGACAGCCGCCCGT
                                                                                                                                                                                                                                CGCCGGCGGCAGCCTCCTGTACAGCCCGCCGCCCTGCAGAGCGCCATGCTGCACTGCC
                                                                                                                                                                                                                                                                                                                                         GCCGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTACCCCGCAGCATGAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                          GGCGGCCCGGGTCCTGGAGTCCCGCCGCCTGCTGCCCGGCCGAGGACCCCACCCCGCCT
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                                                                                                                                               CCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCTCCAGCGACAGCCGCCCGT
                                                                                                                                                                                                                                                                                                                    GCCGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTACCCGCAGCATGAACCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATCATGATGCTGCCGCCACCGCCCACCACGGAGCGAGAAGCCCAGATAGACGCCCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    398;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Citation: Carninci,P. and Hayashizaki,Y. High efficiency full-length cDNA cloning. Methods Enzymol. 303, 19-44 (1999) Seq primer: M13 primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      at Baylor College of
1102 Bates, MC3-3320
Tel: 832-824-4536
Fax: 832-825-4038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Double-stranded CDNA was then digested with BamH1 and Xhol and directionally cloned into the BamH1 and Sall sites of lambda pSB vector. Library went through one round of normalization. Library was constructed by Wei Yu at RIKEN of Japan (Carninci P, Westover A, Nishiyama Y, Ohsumi T, Itoh M, Nagaoka S, SasakiN, Okazaki Y, Muramatsu M, Schneider C, Hayashizaki Y, High efficiency selection of full-length cDNA by improved biotinylated cap trapper., DNA Res 4: 1, 61-6, Feb 28, 1997)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: lambda pSB; Site_1: BamHI; Site_2: EcoRI; First strand cDNA was primed with an anchored XhoI-oligo(dT) primer [5'GGAGGACTCGAGCGCGCAGGAGGAG(T)VN 3'; V=A,C,G; N=A,C,G,T] and then dG tailed. Second strand was primed with a BamHI-dC primer [5'AGAGAGCTCGGATCGGGCCGCAATAATAATAC)]
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/lab_host="DH10B"
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M1) Baylor-HGSC project=TCAA"
/sex="male"
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/db_xref="taxon:9606"
/clone="TCAAP0685"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 396.2; DB 10; Length 402; Pred. No. 9.7e-57;
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                                                                                  BB664186 RIKEN full-length enriched, 0 day neonate lung Mus musculus cDNA clone E030029A20 5', mRNA sequence.
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Contact: Robert Strausberg, Ph.D.
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Tissue Procurement: ATCC
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/clone_tlb="NIH_MGC_21"
/clone_tlb="NIH_MGC_21"
/tlsue_type="choriogarcinoma"
/lab_host="DHIOB (phage-resistant)"
/note="Organ: placenta; Vector: pOTB7; Site_1: XhoI;
/note="Organ: placenta; Vector: poTB7;
/note="Organ: placenta; Vector: poTB7;
/note="Organ: placenta; Vector: poTB7;
/note="Organ: placenta; Vector: poting of Tyrining.
Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
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URL:http://genome.gsc.riken.go.jp,

Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.

Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watchiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y.
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1 (bases 1 to 635)
Arakawa, T., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hiramoto, K., Hori, F., Ishii, Y., Ito, M., Kawai, J., Konno, H., Kouda, M., Koya, S., Matsuyama, T., Miyazaki, A., Nomura, K., Ohno, M., Sokazaki, Y., Okido, T., Saito, R., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagawa, A., Takahashi, F., Takeda, Y., Tanaka, T., Toya, T.,
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The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Sughiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Jap
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RIKEN Mouse ESTs (Arakawa,T., et al. 2001)
Unpublished (2001)
Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human Genome Sequences. Mamm. Genome. 12, 673-677 (2001)
Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Computer based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Kondo, S., Shinagawa, A., Saito, T., Kiyosawa, H., Yamanaka, I., Alzawa, K., Fukuda, S., Hara, A., Itoh, M., Kawai, J., Shibata, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000) Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara, Y., and Hayashizaki, Y.
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pBluescript KS(+) after bulk excision from Lambda FLC I."
                           /dev_stage="0 day neonate"
/lab_host="DH10B"
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/clone="E030029A20"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64 ---- CGGGCTCAGCGATCAGGTCTGAGGATATGACATTACAACTGCCGCTGCCAGCACCAC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 CTCCGCCCGGCCGGACCCGGGCCCGAGATCATGATGCTGCCGCCACCGCCGCCACCAC 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --CTACAGAACCGACTCCTGCACTGTCCTTGGTGGGGCAGTTTCTCACCGTCTTTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGGGACTTCCCTCCACATGAGCTCCCACCCCCTGGAGGTGGCATCCAG------
Email: mEST@mail.nih.gov Oligo-dT track not found, Not I site shown in beginning of sequence is likely internal to the message. cDNA Library Preparation: M.B. Soares Lab Clone distribution: Researchers may obtain BMAP cDNA clones from RESEARCH GENETICS. It should be noted that Bento Soares
                                                                                                                                                                                                                                                                                                                                                                                                                          BE952238 RNA linear EST 04-OCT-7
UI-M-CD0-ayk-d-03-0-UI sl NIH BWAP_Ret2 Mus musculus cDNA clone
UI-M-CD0-ayk-d-03-0-UI 3', mRNA sequence.
                                                                                                                                National Institute of Mental Health
6001 Executive Blvd. Room 7N-7190, MSC 9643, Bethesda,
20892-9643, USA
                                                                                                                                                                                  Contact: Chin, H
                                                                                                                                                                                                                  Genome Res. 6 (9), 791-806 (1996)
                                                                                                                                                                                                                                                  Normalization and subtraction: two approaches to facilitate gene
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                                                                                                                                                                                                                                                                                                                                          Mus musculus
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                                                                                                                                                                                                                                      discovery
                                                                                                                                                                                                                                                                                                                          Eukaryota;
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Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 to 695)
                                                                                                                              USA
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                                                                                                                            TITLE
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Best Local
                                                                                                                                                              AUTHORS
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442 CCCCCGTGGCCACCGCCTCCAGCTTGCCACCAAAGACCTGCGACTTTGCTCAGGACTCC 500
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            262 AACCCCCGCCGGCGGGCAGCCTCCTGTACAGCCCGCCGCCCTGCAGAGCGCCATGCTGC 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             140 CCTCCACTTGCCTGATGCTGGCAGTGGAACCCATCGATGGGGACTTCCCTCCACATG 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  202 CCGCCTGCCGCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTACCCCGCAGCATG 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          248 ACTGTCCTTGGTGGGGCAGTTTCTCACCGTCTTTGTACCCCACCTTCTCCAGTGAAAACC 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     200 AGCTCCCACCCCTGGAGGTGGCATCCAG------CTACAGAACCGACTCCTGC
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Texas Children's Cancer Center and Human Genome at Baylor College of Medicine 1102 Bates, MC3-3320 Houston, TX 77030, USA Tel: 832-824-4536 Fax: 832-825-4038
                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 131)
Wei, Y., Tsang, Y.T.M., Mei, G., Ku, J.M., Ali-Osman Jr., F.R., Muzny, D., Bouck, J., Gibbs, R.A., and Margolin, J.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BEX242275

131 bp mRNA linear EST 03-OCT-2001
TCAAP1E1545 Pediatric acute myelogenous leukemia cell (FAB M1)
Baylor-HGSC project=TCAA Homo sapiens cDNA clone TCAAP1545, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 is generating a small number of additional specialized non-redundant arrays of BMAP cDNAs whose availability will be considered under appropriate and limited collaborative arrangements Seq primer: M13 Forward
                                                                                                                                                            Unpublished (2000)
Contact: Dr. Judith F. Margolin
                                                                                                                                                                                                                          Pediatric Leukemia cDNA Sequencing Project
                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BE242275.1 GI:9094002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence.
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/lab_host="DH10B' (Life Technologies)"
/note="Vector: pf7730-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The
NIH_BMAP_Ret2 library is derived from mouse neonatal
retina tissue. For a detailed description of the library
from which this clone was derived, please visit our web
site at brainest eng.uiowa.edu.
TAG_SEQ-None found"

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/db_xref="taxon:10090"
/clone="UI-M-CD0-ayk-d-03-0-UI"
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/dev_stage="1 day"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23.28;
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Pred. No. 2.8
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                                                                                                                           Sequencing Center
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clones@txccc.org

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BC019206
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22 GGCGGCAGCTGCGAGGCTCGGAGAAACAGGCGCCCGGCCCGGCCTCCGCCCCGGCCCGGACCCG 81
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                                                                                                                                                                                                                                                                                                                                                                                                                BC019206 2658 bp mRNA linear HTC 11-DEC-Mus musculus, Similar to KIAA0963 protein, clone IMAGE:5052084,
                                                                                                                                                                                                                                                                            Mus musculus
                  NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                    Direct Submission
Submitted (07-DEC-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Genetic Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                       nouse mouse
                                                                                                                                                                                                                                                                                                                                              BC019206.1
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/first strand cDNA was primed with an anchored
XhoI-oligo(dT) primer [5'GGAGGACTGGAGGGCGCCAGGAGGAG(T)VN
3'; V-A,C,G; N-A,C,G,T] and then dG tailed. Second strand
was primed with a BamHI-dC primer
[5'ARAGACTCGAGTCGCGGCGCAATAATAATAATAATAATC)
Double-stranded cDNA was then digested with BamHI and XhoI
and directionally cloned into the BamHI and SalI sites of
lambda pSB vector. Library went through one round of
normalization. Library was constructed by Mei Yu at RIKEN
of Japan (Carninci P, Mestover A, Nishiyama Y, Ohsumi T,
Itoh M, Nagacka S, SasakiN, Okazaki Y, Muramatsu M,
Schneider C, Hayashizaki Y, High efficiency selection of
full-length cDNA by improved biotinylated cap trapper.,
DNA Res 4: 1, 61-6, Feb 28, 1997)

19 a 47 c 49 g 15 t lothers
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/cell_type="myeloid cell"
/dev_stage="pediatric 6 years"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="Pediatric acute myelogenous leukemia cell (FAB
M1) Baylor-HGSC project=TCAA"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
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AG084012
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                                                                                                                                                                                                                                                                                                                                                                                                           367
                                                                                                                                                                                                                                                                                                                                                                                                                                           442 CCCCCGTGGCCACCGCCTCCAGCTTGCCACCAAGACACCTGCGACTTTGCTCAGG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199 AGCTCCCACCCCTGGAGGTGGCATCCAG------CTACAGAACCGACTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          307 AACAGTTCGTGGGTTCCACCCCATTCCTTGGTGGCCAGTCTTGCCCTGAAACCAGCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          322 ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCTCCAGCGACAGCC
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                                                                                                                                                                                                                                                                                                                                                                                                           CCACCACAGCCACCGTCCCCAGCTTCTTCTCCAAGAGCAGCGACTTTCCTCAGG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGTCCTTGGTGGGGGCAGTTTCTCACCGTCTTTGTACCCCACCTTCTCCAGTGAAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 39 Row: m Column: 8 This clone was selected for full length sequencing because it passed the following selection criteria: Similarity but not identify the protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shevchenko,Y., Wetherby,K.D., Beckstrom-Sternberg,S.M., Benjamin,B., Blakesley,R.W., Bouffard,G.G., Brinkley,C., Brooks,S., Dietrich,N.L., Guan,X., Gupta,J., Ho,S.-L., Karlins,E., Legaspi,R., Lim,M., Maduro,Q.L., Masiello,C., Mastrian,S.D., McCloskey,J.C., McDowell,J., Pearson,R., Snyder,B., Stantripop,S., Thomas,P.J., Tiongson,E.E., Touchman,J.W., Tsurgeon,C., Vogt,J.L., Walker,M.A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. CONSORTHUM (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
                                                       ACO84012.1 GI:16635814
GSS; GSS (genome survey sequence).
Pan troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male
BAC Library clone:PTB-081K02.R.
Pan troglodytes
Pan troglodytes
                                                                                                                                                                                                   Pan troglodytes DNA, clone: AG084012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This clone has the following problem: incomplete processing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Web site:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaithersburg, Maryland,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequencing Center (NISC),
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                              AG084012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="Liver, normal. 5 month old male mouse."
/clone_lib="NCI_CGAP_Li9"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Vector: pCMV-SPORT6"
761 c 696 g 601 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="IMAGE: 5052084"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 112.8; DB 11; Length 2658; Pred. No. 1.1e-09; 0; Mismatches 92; Indels 12;
                                                                                                                                                                                                                              635 bp DNA linear GSS (
ne: PTB-081K02.R, genomic survey
                                                                                                                                                                                                                                                                  GSS 03-NOV-2001
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Gaps

303

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109;
Web: www.genoscope.cns.fr)
Determination of this BAC-end sequence was carried out as part of collaboration with the European Drosophila Genome Project (EDGP)-
http://www.edgp.ebi.ac.uk - This Drosophila melanogaster BAC
library (Dros BAC) was made by Alain Billaud at CEPH (Centre
d'Etude du Polymorphisme Humain) with funding provided by a MRC
project grant. The DNA was prepared from embryos by Alain Bucheton
and Genevieve Payan. It has been constructed in the vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Subhiro-chou, Tsutumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-911, Fax:81-45-503-9170) Tel:81-45-503-911, Fax:81-45-503-9170 Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                  Submitted (23-JUL-1999) Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fi
                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Ins
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
1 (bases 1 to 776)
                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CNSOLORY 776 bp DNA linear GSS 26-JUL-1999 Drosophila melanogaster genome survey sequence SP6 end of BAC BACN04P24 of DrosBAC library from Drosophila melanogaster (fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
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                                                                                                                                                                                                                                                                                                                                                           fruit fly.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BAC end sequences of Library PTB
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R.Site 1 : SacI
R.Site 2 : SacI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                          genomic survey sequence.
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                                                                                                                                                                                                                Submission
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/clone_lib="PTB Chimpanzee Male BAC Library"
236 c 189 g 105 t 1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="male
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="PTB-081K02.R"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism≈"Pan troglodytes"
/db_xref="taxon:9598"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             194 CCCCCGAGCGCCGGC---ACCCCGCGSMGGCCGGCAGSCCCCSCCGSCGSSCSSCSSCSCSCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  184 CCGGCCGAGGACCCCACCCCCCCCGCCGGCCGATGCTTGCAGTGGGGCCCGCCATGGACA 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124 GCGAGAAGCCCAGATAGACGCCCCGGGCCCCCGGGTCCTGGAGTCCCGCCGCCGCCTGCTGC 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74 GSSSCCSGCSCCCGSSCGCGCCCSCSCGSSCGSCGCCCCGCCAGCGCCCSCSCGGGCC 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64 CGCGCCCGGCCGGACCCGGGCCCGAGATCATGATGCTGCCGCCACCGCCGCCGCCACCGCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            174;
                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 951)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AL543262 LTI_NFL006_PL2 Homo sapiens cDNA clone CS0DI001YC22 5
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                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                               Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: segrefégenoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                            AL543262.1
                                                                                                                                                                                                                                   Contact: Genoscope
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/plasmid="ppeloBAC11"
/db_xref="taxon:7227"
/clone_lib="DrosBAC"
/clone="BACN04F24"
/note="end : Sp6"
/note="end : Sp6"
/note="end : Sp6"
    /clone="cs0b1001YC22"
/clone=11b="171_NF1006_PL2"
/tissue_type="placenta"
/tissue_type="placenta"
/note="Vector: pCMYSPORT 6; Site_1: NotI; 1st strand cDNA
                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
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Pred. No. 0.00038;
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RESULT 11
BI149078
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                        NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Nus
1 (bases 1 to 612)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BI149078 612 bp mRNA linear EST 05-JUL-2001
High quality sequence start: 14 High quality sequence stop: 581.
                                                    http://image.llnl.gov
Plate: LLAM11141 row: m column: 13
                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BI149078.1 GI:14609079
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        http://fulllength.invitrogen.com
492 c 154 g 118 t
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 441 GCCCCGTGGCCAC---CGCCTCCAGCTTGCCACCAAAGACCTGCGACTTTGC 490
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  262 AACCCCCGCCGGCGGCAGCCTCCTGTACAGCCCGCCGCCCTGCAGAGCGCCATGCTGC 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202 CCGCCTGCCGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTACCCGCAGCATG 261
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                                                                                                                                                                                                      cDNA Library Preparation: M. Bento Soares, Ph.D.
cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Seq primer: -40ml3 fwd. ET from Amersham
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
Emmert-Buck, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
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                                                                                                                                                                     High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1997)
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/db_xref="taxon:10090"
/clone="IMAGE:5052084"
/clone="NCI_CGAP_Li9"
/clone="NCI_CGAP_Li9"
/lab_bost="0H108 [T1 phage-resistant)"
/note="Organ: liver; Vector: pCMV-SPORT6; Site_1: NotI;
/inct="Organ: liver; Vector: pCMV-SPORT6; Site_1: NotI;
/site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
/site_3: Sall; Cloned unidirectionally. Pr
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/organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 612;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 04-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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VERSION
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                                       Query Match
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    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              474 AAGACCTGCGACTTTGCTCAGGACTCC 500
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: +46 18 67 15 98
Fax: +46 18 30 92 45
Email: Fred.Asiegbuemykopat.slu.se
Seq primer: T7 primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2001)
Contact: Fred O. Asiegbu
Dept. of Forest Mycology & Pathology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Asiegbu, F.O., Nahaikova, J., Choi, W., Stenlid, J. and Dean, R.A. Expressed sequence tags of randomly selected CDNA clones from the interaction of the root rot fungus (Reterobasidion annosum) with seedling roots of Scots pine (Pinus sylvestris)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B141657 834 bp mRNA linear EST 15-AUG-2001 hasp001xm12f Heterobasidion annosum - Scots pine infection stage subtraction cDNA library (hasp) Pinus sylvestris/Heterobasidion annosum cDNA clone hasp001xm12f, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        86;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Swedish University of Agriculture,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; mixed EST libraries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1 to 834)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51
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                                                                                                                                                                     /Clone=ThaspOllxml2f"

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Pinus sylvestris/Heterobasidion annosum"
/db_xref="taxon:169015"
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15.0%;
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98.9%;
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                                                                                                                                                    650 g
Score 74.8; DB 10;
Pred. No. 0.0021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 75; DB 9;
Pred. No. 0.0018;
                                                                                                                                                            annosum (FP5).
50 g 27 t
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Box 7026, S-750 07, Uppsala,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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                                                                                                                                                            108 others
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                                       Length 834;
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Pan troglodytes DNA, clone: PTB-003A05.F, genomic survey sequence.
AG030581
AG030581.1 GI:16557454
GSS; GSS (genome survey sequence).
Pan troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male
BAC Library clone:PTB-003A05.F.
                                                                                                                                                                                                                                                                                                                                                                                                        (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Tel:81-45-503-9111, Fax:81-45-503-9170)
Tel:81-45-503-9111, Fax:81-45-503-9170
Tel:81-45-503-9111, Fax:81-45-503-9170
Tel:81-45-503-9170
Tel:81-45-503-91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
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Totoki,Y., Watanabe,H. and Sakaki,Y.
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Totoki,Y., Watanabe,H. and Sakaki,Y.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
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/organism="Pan troglodytes"
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                                                                Tel: +46 18 67 15 98 Fax: +46 18 30 92 45
                                                                                                                                   Contact: Fred O. Asiegbu
Dept. of Forest Mycology & Pathology
                                                                                                                                                                                 Asiegbu, F.O., Nahaikova, J., Choi, W., Stenlid, J. and Dean, R.A. Expressed sequence tags of randomly selected cDNA clones from the interaction of the root rot fungus (Heterobasidion annosum) with seedling roots of Scots pine (Pinus sylvestris)
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                                                                                                                                                                                                                                                                                        Pinus sylvestris/Heterobasidion annosum Pinus sylvestris/Heterobasidion annosum
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hasp001xo20f Heterobasidion annosum - Scots pine infection stage
subtraction cDNA library (hasp) Pinus sylvestris/Heterobasidion
annosum cDNA clone hasp001xo20f, mRNA sequence.
                              pes
                                                                                                                Swedish University of Agriculture, Box 7026,S-750 07, Uppsala,
                                                                                                                                                                    Unpublished (2001)
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primer: T7 primer.
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/clone="PTB-003A05.F"
/sex="male"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="hasp001xo20f"
/clone_lib="Heterobasidion annosum - Scots pine infection
stage subtraction cDNA library (hasp)"
/dev_stage="Seedling roots of scots pine were infected for
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/db_xref="taxon:169015"
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OM nucleic - nucleic search, using sw model

GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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EST clone BH41. H
Human secreted pro
Human musculoskele
Human colon cancer
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Human colon cancer
Epstein Barr Virus
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                                              Stockert E, Scanlan MJ, Jager D,
                                                                          (LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CANCER RES. (CORR ) CORNELL RES FOUND INC.
                                                                                                                                                                                                                                                                                             Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; meianoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; synovial sarcoma; cytostatic; ds.
                                                                                                                                                                                                                                                                                                                                                          Human small cell lung cancer associated gene, KIAA0963.
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Database :

N\_Genesseq\_032802:\*
1: /SIDS1/gegdata/nc
2: /SIDS1/gegdata/nc
3: /SIDS1/gegdata/nc
4: /SIDS1/gegdata/nc
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19: /SIDS1/gegdata/nc
19: /SIDS1/gegdata/nc
20: /SIDS1/

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Total number of hits satisfying chosen parameters:

1736436 seqs, 858457221 residues

Gapop 10.0 , Gapext 1.0

Scoring table: Title: Perfect score:

US-09-489-101A-13\_COPY\_1\_500

Result

Score

Query Match Length

DB Ω

SUMMARIES

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500 500 173 110.8 104.6 65 60

100.0 100.0 34.6 22.2 20.9 113.0 112.0 112.0

AAD11120 AAC75998 AAV87103 AAC15646 AAL37392

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Query Match
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Human ORFX ORF1553 polynucleotide sequence SEQ ID NO:3105
                                                                                                                           08-FEB-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients affilted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a phAhp, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (MA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a small cell lung cancer associated gene designated as NY-SCLC-11, encoding human KIAA0963 protein.
                                                                                                                                                                                                                                                              AAC75998;
                                                                                                                                                                                                                                                                                                                                                                                 AAC75998 standard; cDNA; 4924 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481 GCGACTTTGCTCAGGACTCC 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481 GCGACTTTGCTCAGGACTCC 500
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121 GAAGCAAGACCCAGATAGACGCCCCGGCGCCCCGGGTCCTGGAGTCCCGCCCCCCTGC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301 CCCTGCAGAGCGCCATGCTGCACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGCCCAGACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCTTGCCACCAAAGACCT
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                                                                                                                                                                            CC which represent the human ORRY open reading frames 1 to 3161. The ORRY CC sequences have activities such as: cytostatic; hepatotropic; vulnerary; CC antiparking anticorvolus static; hepatotropic; vulnerary; CC antiparking anticorvolus static; hepatotropic; vulnerary; CC antiparking anticorvolus static; antiparkinsonian; noctropic; neuroprotective; costepathic; anticorvolus static; thrombolytic; cosquilant; vasotropic; antiinflammatory; antibacterial; antiviral; antifungal; antirematic; CC antifungation; antibacterial; antiviral; antifungal; antirematic; cantifungal; antirematic; conditions associated with an ORRY-associated disorder. The presence of or predisposition to, or preventing or treating conditions associated with an ORRY-associated disorder. The contract static acids can be used to express ORRY proteins in gene therapy cortors. The proteins and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative disorders, osteoarthritis, cc proliferative disorders, actima, antilnflammatory disease; to enhance conclural haemoglobinuria, antilnflammatory disease; to enhance cc coapulation; to inhibit thrombosis; and as a contraceptive.
                                                                                           Matches
                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antipsoriatic; meuroprotective; anticorvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant; immunostimulant; thrombolytic; coagulant; vasotropic; antidlabetic; hypotensive; dermatological; immunosuppressive; antifindameator; hypottensive; dermatological; immunosuppressive; antifindameator; antibacterial; antifungal; antifheumatic; antithyroid; antinamento; gene therapy; cancer; proliferative disorder; hypettension; neurodegenerative disorder; osteoarrhritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; bone damage; cartilage damage; antiinflammatory disease; coagulation; thrombosis; contraceptive; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-MAR-1999; 99US-0127607.

02-APR-1999; 99US-0127636.

05-APR-1999; 99US-0127728.

30-MAR-2000; 2000US-0540763.
                                                                                                                                                                      Sequence 4924 BP; 892 A; 1694 C; 1572 G; 765 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 5; Page 2323-2326; 5507pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel nucleic acids and peptides derived from open reading frame X, useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shimkets RA, Leach M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-MAR-2000; 2000WO-US08621.
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                                                                  Locat 500;
2000-602362/57.
DB; AAB41789.
                                                                                                         Similarity
                                                                                        100.0%;
ilarity 100.0%;
Conservative 0
                                                                                      0;
                                                                                                      Score 500;
                                                                                        Mismatches
                                                                                                            4e-89;
                                                                                                                               DB 21;
                                                                                      0;
                                                                                      Indels
                                                                                                                               Length 4924;
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                                                         New polynucleotides encoding human secreted proteins - derived from e.g. human blood, kidney, foetal lung, placenta, testes, brain, ovary, pituitary, retina and colon cDNA libraries
                                                                                                                                                                                                                                                                                                               Expressed sequence tag; secreted protein; haematopoiesis regulator; tissue growth; activin; inhibin; tumour invasion suppressor; EST; human; chemotaxis; chemokinesis, haemostasis; gene therapy; thrombolysis; receptor; ligand; anti-inflammatory; tumour inhibitor; ds.
 This sequence represents an expressed sequence tag polynucleotide of the invention. The polynucleotid
                                   Claim 1; Page 453-454; 633pp; English
                                                                                                                                                                                                                    10-APR-1998;
                                                                                                                                                                                                                                           15-OCT-1998.
                                                                                                                                                                                                                                                                   W09845435-A2
                                                                                                                                                                                                                                                                                          Homo sapiens
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                                                                                                           WPI; 1999-070076/06.
                                                                                                                                              Agostino MJ,
                                                                                                                                                                                             10-APR-1997;
                                                                                                                                   Racie
                                                                                                                                                                     (GEMY ) GENETICS INST INC.
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                                                                                                                               Jacobs K,
Spaulding V,
                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                             97US-0835913.
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                                                                                                                                 Treacy M;
polynucleotides
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 (EST), an es of the
 invention are
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RESULT 4
AAC15646
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treating, preventing or ameliorating medical conditions in humans and animals, although no supporting data is given. Suggested activities include nutritional activity, immune stimulating or suppressing activity, haemostatic provides regulating activity, tissue growth activity, haemostatic activin/inhibin activity, chemotactic/chemotinetic activity, haemostatic and thrombolytic activity, receptor/ligand activity, anti-inflammatory activity, cadherin/tumour invasion suppressor activity, the EST sequences are also stated to be useful for gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 343 BP; 58 A; 143 C; 69 G; 73 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              all secreted EST sequences isolated from a variety of human tissue sources. The EST sequences and proteins encoded by them are predicted to have useful biological activities which would make them suitable for
                                                                                                                                                                                                                                                                                                                                                                                                                                        gene therapy; chromosome mapping; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human secreted protein 5' EST, SEQ ID NO: 19721.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAC15646 standard; cDNA; 114
                                                                                                                                                                                                                           Dumas Milne Edwards J,
                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
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                                                                                                                                                                                              WPI; 2000-500381/45.
                                                                                                                                                                                                                                                        (GEST ) GENSET
                                                                                                                                                                                                                                                                                      26-FEB-1999;
                                                                                                                                                                                                                                                                                                                 21-FEB-2000; 2000EP-0200610
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        328 CCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCTCCAGCGACAGCCGCCCGT 387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18 CCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCTCCAGCGACAGCGCCCGT 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCATGAGCTCCGCCTCCTTCCTCGGCAGCCAGCCAGCCCAGACACCAGCAGCAGCCATGCCCCG 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCCACCGCCTCCAGCTTGCCACCAAAGACCTGCGACTTTGCTCAGGACTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCCACCGCCTCCAGCTTGCCACCAAAGACCTGCGACTTTGCTCAGGACTCC 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCATGAGCTCCGCCTCCTTCCTCGGCAGCCAGCCCTGCCCAGACACCAGCTATGCCCCCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                      9905-0122487
                                                                                                                                                                                                                                                                                                                                                                                                                                                        expressed sequence tag;
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100.0%;
                                                                                                                                                                                                                           Duclert A,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 173; DB 20; Pred. No. 2.6e-25;
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                                                                                                                                                                                                                           Giordano J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        secreted protein; cDNA isolation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 343;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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The present sequence is one of a large number of 5 ESTs derived from mRNAs encoding secreted proteins. No ORF has yet been conclusively identified within the present sequence. The 5 ESTs were prepared from total human RNAs or polyA+ RNAs derived from 30 different tissues. EST sequences usually correspond mainly to the 3 untranslated region (UTR) of the mRNA because they are often obtained from oligo-dT primed cDNA

Claim 1; SEQ ID 19721; 71pp + CD-ROM; English.

New nucleic acid that is a 5' expressed sequence tag (5' EST) for obtaining cDNAs and genomic DNAs that correspond to 5'ESTs and fo

diagnostic, forensic, gene therapy and chromosome mapping procedures

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RESULT 5
AAL37392/C
ID AAL37392 standard; DNA; 1553 BP.
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Matches 1
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Best Local
  31-JAN-2000
04-FEB-2000
24-FEB-2000
02-MAR-2000
16-MAR-2000
17-MAR-2000
17-MAR-2000
19-MAY-2000
07-JUN-2000
07-JUN-2000
07-JUL-2000
07-JUL-2000
07-JUL-2000
11-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antilicer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiavascular disorder; neurological disease; infection; human; secreted protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        libraries. Such ESTs are not well suited for isolating cDNA sequences derived from the 5' ends of mRNAs and even in those cases where longer cDNA sequences have been obtained, the full 5' UTR is rarely included. 5' ESTs are derived from mRNAs with intact 5' ends and can therefore be used to obtain full length cDNAs and genomic DNAs. 5' ESTs are also used in diagnostic, forensic, gene therapy and chromosome mapping procedures. They are used to obtain upstream regulatory sequences and to design expression and secretion vectors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAL37392;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200155367-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculoskeletal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human musculoskeletal system related polynucleotide SEQ ID NO 3757.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 114 BP; 24 A; 42 C; 38 G; 7 T; 3 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GATGCTGCCGCCACCGCCACCACGAGCGAGAAAGCCCAGATAGACGCCC 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35 AGGCTCGGAGAAACAGGCGCCGCGGGGCTCCGCGCCCGGGCCGGACCCGGGGCCCGAGATCAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGCTCGGAGAAACAGGCGCGGGGGCTCCGCGCCCGGMCGGACCCGGGCMMGAGATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109;
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2000US-0179065.
2000US-0180628.
2000US-01806350.
2000US-0189874.
2000US-019076.
2000US-019076.
2000US-0209467.
2000US-0209467.
2000US-0215135.
2000US-0215135.
2000US-02154880.
2000US-0217496.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001WO-US01338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         system; ds.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    infection; human; secreted protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 110.8; DB 2
Pred. No. 3.5e-13;
3; Mismatches 0
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      114-SEP 2000
21-SEP 2000
25-SEP 2000
25-SEP 2000
26-SEP 2000
27-SEP 2000
29-SEP 2000
20-CCT 2000
02-CCT 2000
03-CCT 2000
04-NOV 2000
06-NOV 2000
08-NOV 2000
08-NO
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22-AUG-2000
23-AUG-2000
30-AUG-2000
01-SEP-2000
01-SEP-2000
01-SEP-2000
05-SEP-2000
06-SEP-2000
06-SEP-2000
08-SEP-2000
08-SEP-2000
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14 - NUG - 2000)
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18 - AUG - 2000
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22 - AUG - 2000
23 - AUG - 2000
2000US-0241826.

2000US-024617.

2000US-0246476.

2000US-0246476.

2000US-0246476.

2000US-0246477.

2000US-0246477.

2000US-0246477.

2000US-0246523.

2000US-0246524.

2000US-0246524.

2000US-0246526.
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2000US-0225270
2000US-0225447
2000US-0225757
2000US-0225757
2000US-0225758
2000US-0225759
2000US-0225759
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2000US-0237030
2000US-0237040
2000US-0239935
2000US-0239937
2000US-0240960
2000US-0241781
2000US-0241786
2000US-0241786
2000US-0241786
2000US-0241808
2000US-0241808
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2000US-0235484
2000US-0235834
2000US-0235836
2000US-0236367
2000US-0236367
2000US-0236368
2000US-0236369
2000US-0236369
2000US-0236807
2000US-0236807
2000US-0236807
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2000US-0232081
2000US-0231968
2000US-023397
2000US-0232399
2000US-0232399
2000US-0232400
2000US-0232401
2000US-0233403
2000US-0233063
2000US-0233063
2000US-0233063
2000US-023423
2000US-0234274
2000US-0234274
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2000US-02276868
2000US-0227182
2000US-0229709
2000US-0229343
2000US-0229344
2000US-0229345
2000US-0229345
2000US-0229345
2000US-0229345
2000US-0229345
2000US-0229345
2000US-0230437
2000US-0230437
2000US-0230437
2000US-0231243
2000US-0231244
2000US-0231244
2000US-0231244
2000US-0231413
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The invention relates to novel genes (AAL34669-AAL37666) and proteins (AAB03087-ABB04109) associated with the musculoskeletal system useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (ant)agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, other cancers e.g. Addison's disease, allergies, autoimmune thyroiditis, diabetes mellitus, Croh's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Croh's disease, (c) cardiovascular disorders such as myocardial ischaemias; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy; and (f) infectious diseases such as viral, bacterial, fungal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
17-NOV-2000
01-DEC-2000
01-DEC-2000
05-DEC-2000
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08-DEC-2000
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17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                         Isolated polypeptide for treating, preventing and/or prognosing disorders related to the musculoskeletal system including musculoskeletal cancers and also for testing and detection e.g.
                                                                                                                                                                                                                                                                                                Example 2; SEQ ID NO 3757; 781pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-NOV-2000;
17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-451937/48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                              Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0246609
2000US-0246610
2000US-0246613
2000US-0249207
2000US-0249207
2000US-0249209
2000US-0249210
2000US-0249210
2000US-0249212
2000US-0249212
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2000US-0249213
2000US-0249214
2000US-0249215
2000US-0249215
2000US-0249214
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2000US-0251030
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2000US-0249300
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parasitic infections.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directions.

ftp.wipo.int/pub/published\_pct\_sequences

in electronic format directly

at

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AAA02484/c
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                            Williams LT, ESCONEUR Reinhard C, Glese K, R Lamson G, Drmanac R, C Lamson '-- n Kita D,
                                                                                                                                                                                                                                                                                                                                                                            14-MAY-1998;
15-MAY-1998;
15-MAY-1998;
21-OCT-1998;
27-OCT-1998;
AAA00010 to AAA02716 represent polynucleotides isolated from cDNA libraries constructed from human colon cancer cell lines. The present invention also describes a method of detecting differentially expressed genes correlated with a cancerous state of a mammalian cell, comprising detecting at least one differentially expressed gene product in a test sample derived from a cell suspected of being cancerous, where detection of the differentially expressed gene product is correlated with a cancerous state of the cell from which the test sample was derived. The polynucleotides sequences can be used in a method for detecting differentially expressed genes correlated with a cancerous state of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1553 BP; 294 A; 461
                                                                                                                                                                                                                                                                                                                                   (CHIR )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; colon cancer; tumour; diagnosis; gene expression product; probe; detection; cancerous state; metastasis; identification; breast cancer; oestrogen receptor-positive breast cancer; therap cestrogen receptor-negative breast cancer; lung cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA02484 standard; cDNA;
                                                                                                                                                                                                                                   WPI; 2000-126369/11.
                                                                                                                                                             Claim 1; Page 994; 1097pp; English.
                                                                                                                                                                                                        Polynucleotide library used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-NOV-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              801 TCCACCGCGACCCCTGCCTGGCCCGACCCCGCTTGTGGGTCCGGCGCGCTCCCCGCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 CTCCGCGCCCGGACCCGGGCCCGAGATCATGATGCTGCCGCCACCGCCGCCACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GCCCGAAACCCGGAAGTGAGCGGCGGCAGCTGCGAGGCTCGGAGAAACAGGCGCCGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCCGAAACCCCGGAAGTGAGCGGCGGCAGCTGCGAGGCTCGGAGAAACAGGCGCCGCGGG
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                                                                                                                                                                                                                                                                                                                                    HYSEQ
                                                                                                                                                                                                                                                                                                                                                 CHIRON CORP.
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                                                                                                                                                                                                                                                                                                                                    INC.
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98US-0085537.
98US-0085696.
98US-0105234.
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                                                                                                                                                                                                                                                                          J, Innis MA, Randazzo F, Ke Crkvenjakov R,
                                                                                                                                                                                                                                                                 Garcia V,
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                                                                                                                                                                                                                                                                                                     Innis MA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polynucleotide sequence SEQ ID NO:2475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 104.6;
Pred. No. 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; 563
                                                                                                                                                                                                         determine
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                                                                                                                                                                                                                                                               Jones LW,
                                                                                                                                                                                                                                                                            Kennedy GC,
R, Dickson M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç;
                                                                                                                                                                                                                                                               Garcia PD, Sudduth-
ennedy GC, Pot D, Ka
Dickson M, Drmanac
nes LW, Stache-Crain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                235
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                                                                                                                                                                                                         cancerous states
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T; 0 other;
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                                                                                                                                                                                                                                                                                                        Sudduth-Klinger J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                             Kassam
                                                                                                                                                                                                         of mammalian
                                                                                                                                                                                                                                                               B;
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                                                                                                                                                                                                                                                                             Labat I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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RESULT 7
AAV55831,
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                 Fusion protein; stabilising polypeptide; proteolytic degradation; resistance; half-life; autoimmune disease; infilammation; nitro drug; IkappaB regulator protein; infilammatory bowel disease; in vivo imaging; nitroreductase protein; enzyme therapy; prodrug therapy; protease;
                                                                                                                                         Nucleotide sequence of the stabilising sequence-encoding insert.
                                                     Epstein-barr virus.
                                                                          cancer; pathological condition;
                                                                                                                                                                     18-NOV-1998
                                                                                                                                                                                                                AAV55831 standard; DNA; 799 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1000 BP; 21 A; 53 C; 574 G; 22 T; 330 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pre-metastatic or metastatic cancerous states, stages of cancer, or responsiveness of cancer to therapy). This is particularly for breast cancer, oestrogen receptor-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mammalian cell. The polynucleotides can also be used as probes for detecting and mapping related genes. They can be used in diagnosis and prognosis of diseases and disorders (e.g. identification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             negative breast cancer, lung cancer, and colon cancer.
                                                                                                                                                                                                                                                                       480 NCNCCCNNCGNC 469
                                                                                                                                                                                                                                                                                             489 GCTCAGGACTCC 500
                                                                                                                                                                                                                                                                                                                429 GACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCTTGCCACCAAAGACCTGCGACTTT 488
                                                                                                                                                                                                                                                                                                                                                                                                         309 AGCGCCATGCTGCACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTC 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                   249 TACCCGCAGCATGAACCCCCGCCGGCGGGCAGCCTCCTGTACAGCCCGCCGCCCCCTGCAG 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   189 CGAGGACCCCACCCCGCCTGCCGGCCCGATGCTTGCAGTGGGGCCCCGCCATGGACAGGGAT 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129 AAGCCCAGATAGACGCCCCGGCGCCCCGGGTCCTGGAGTCCCGCCGCCTGCTGCCCGGC 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69 CCGGCCGGACCCGGGCCCGAGATCATGATGCTGCCGCCACCGCCGCCCACCACGGAGCGAG 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 CCCGGAAGTGAGCGGCGGCAGCTGCGAGGCTCGGAGAAACAGGCGCCGCGGGGCTCCGCGC 68
                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.00031;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
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      AAA02488;
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15-NOV-1996;
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                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                              AGGACCCCACCCGCCTGCCGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTA 250
                                                                                                                                                                                                                                                                                                                                                             170;
                                                                                                                                                                                                                                                                                                                                                                      Similarity
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insert. The invention provides a method for increasing the resistance of a core protein to proteclytic degradation that comprises linking or inserting onto or into the core protein a stabilising polypeptide of communia [(Glya)X(Glyb)Y(Glyc)Z]n where Glya, Glyb, Glyc are 1-6 sequential Gly residues and X, Y, Z are Ala, Ser, Val, Ile, Leu, Met, Che, Pro or Thr and n can be anything between 1-66. X, Y and Z need not be identical from n repeat to n repeat. Alternatively a nucleic acid commoding a core protein. The fusion proteins of the commoding a core protein. The fusion proteins of the core invention are more resistant to degradation by proteases and, thus, have consider that fille than the unfused core protein. The products can be considered for treating autoimmune diseases, cancer and inflammation. In core particular, the core protein may be an IkappaB regulator protein for the treatment of inflammatory bowel disease, or a nitroreductase protein which can activate nitro drugs in enzyme/prodrug therapy to treat cancer or other pathological conditions. The fusion proteins can also be used in CK diagnostic methods such as in vivo imaging.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New fusion proteins resistant to proteolytic degradation - comprising a core protein with a stabilising polypeptide comprising a peptide sequence containing glycine repeats
Sequence 799 BP; 201 A; 106 C; 479 G; 13 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This is a nucleotide sequence of the stabilising sequence-encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Fig 4B; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96US-0030986
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12.0%; Score 60; DB 19 Pred. No. 0.0029 DB 19; Length 799;

Conservative 0; Mismatches 165; Indels 1; Gaps 1;

CCCGCAGCATGAACCCCCGGCGGGGGGAGCCTCCTGTACAGCCCGCCGCCCCTGCAGAG

CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT

97

430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465

96 CCTCCTGCTCCTGCCCCCTCCTGCTCCTGCCCCCT 61

AAA02488 standard; cDNA; 1218

19-MAY-2000

(first entry)

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                                                                                                                                                                                                                                                             invention also describes a method of detecting differentially expressed genes correlated with a cancerous state of a mammalian cell, comprising detecting at least one differentially expressed gene product in a test cample derived from a cell suspected of being cancerous, where detection of the differentially expressed gene product in a test cancerous state of the cell from which the test sample was derived. The polynucleotides sequences can be used in a method for detecting configuration cell. The polynucleotides correlated with a cancerous state of a mammalian cell. The polynucleotides can also be used as probes for cetecting and mapping related genes. They can be used in diagnosis and corresponsiveness of cancer to therapy). This is particularly for breast cancer, oestrogen receptor-positive breast cancer.
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15-MAY-1998;
15-MAY-1998;
21-OCT-1998;
27-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           breast cancer; oestrogen receptor-positive breast cancer; therapy; oestrogen receptor-negative breast cancer; lung cancer; ss.
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Reinhard C, Giese K,
Lamson G, Drmanac R,
Leshkowitz D, Kita D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 995-996; 1097pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polynucleotide library used to determine calls -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA00010 to AAA02716 represent polynucleotides isolated from cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CHIR )
                                                                                                                                                                                                                                      Sequence 1218
 852
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                                                                                                                                                                                         Local
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CACCACGGAGCGAGAAGCCCAGATAGACGCCCCGGGCCCCCGGGTCCTGGAGTCCCGCC 174
                                                                                                                                             CGCGGGCTCCGCGCCCGGGCCCGGGGCCCGAGATCATGATGCTGCCGCCACCGCCGC 114
                             GCCTGCTGCCCGGCCGAGGACCCCACCCCGCCTGCCGCCCGATGCTTGCAGTGGGGCCCG 234
                                                                                                                                                                             al Similarity
123; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      colon cancer; tumour; diagnosis; gene ex detection; cancerous state; metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHIRON CORP. HYSEQ INC.
                                                                                                                                                                          12.0%;
nilarity 27.6%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer cell line polynucleotide sequence SEQ ID NO:2479
                                                                                                                                                                                                                                      BP;
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98US-0085537.
98US-0085696.
98US-0105234.
98US-0105877.
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                                                                                                                                                                                                                                       9 A; 31 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Randazzo F, K
Crkvenjakov R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Garcia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Innis MA,
                                                                                                                                                                             0;
                                                                                                                                                                              Score 60; DB 21; Length 1218; Pred. No. 0.0029; O; Mismatches 323; Indels
                                                                                                                                                                                                                                         494 G;
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Jones LW, Stache-Crain B;
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Kennedy GC, Pot D, Kassam A;
R, Dickson M, Drmanac S, Labat
                                                                                                                                                                                                                                         37 T; 647 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene expression
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mammalian
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RESULT 9
AAX909/9
XX AAX9099
XX AAX9099
XX DPStei
DT 17-JAN
XX Epstei
XX Epstei
KW episom
KW eucary
KW multip
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Epstein Barr Virus Nuclear Antigen 1 DNA; plasmid pCMVEBNA; EBNA 1; episome; transfection; origin of replication; EBV orip; receptor; eucaryotic host cell; recombinant cell line; ion channel; gene thera multiple gene expression; transporter protein; transcription factor; adhesion molecule; antisense therapy; gene amplification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Epstein Barr Virus Nuclear Antigen 1 (EBNA 1) DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX90924 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cell immortalisation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Epstein-barr virus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                18-MAR-1998;
06-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-SEP-1999.
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The present sequence is a DNA encoding Epstein Barr Virus Nuclear Antigen 1 (EBNA 1), which is obtained from commercially available
                                                                                      Claim 24; Fig 2; 86pp; English.
                                                                                                                                           New method for expressing genes from recombinant eukaryotic cells, useful for gene therapy {\ \ }
                                                                                                                                                                                                                                  P-PSDB;
                                                                                                                                                                                                                                                                                                                  Damaj BB,
                                                                                                                                                                                                                                                                                                                                                                        (PHAR-) PHARMACOPEIA INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCAGCCCTGCCCAGACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCTTGCCACCAA 474
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                                                                                                                                                                                                                                  AAY28843.
                                                                                                                                                                                                                                                                                                                     Horlick RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0040961.
98US-0130114.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US03307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  '/product= "EBNA 1"
/transl_except= (pos:799..800, aa:Gly)
/note= "The sequence is described throughout the specification as being 1926 nucleotides long, but sequence of only 1925 bp has been given in figure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        plasmid pCMVEBNA. EBNA 1 protein is used to stably maintain episomes containing EBV origin of replication (orip) and a gene encoding protein or RNA of interest. Eucaryotic host calls expressing EBNA 1 protein are transfected with these episomes to produce recombinant cell lines expressing multiple genes of interest. This provides a rapid and reliable method of stably expressing multiple genes in transfected cells. The episomes are useful in the transfection of genes encoding receptors, transporter proteins, ion channels, adhesion and transferred center proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             molecules and transcription factors. The episomes carrying desired genes can also be used to transfect cells in gene therapy, antisense therapy,
              P-PSDB; AAY95856
                            WPI; 2000-515062/46
                                                                                                                 11-FEB-1999;
                                                                                                                                                                                                      WO200047778-A1
                                                                                                                                                                                                                                  Epstein-barr virus
                                                                                                                                                                                                                                                             gene therapy;
                                                                                                                                                                                                                                                                           EBV; nuclear antigen 1; EBNA1; episome; transfection; selection;
                                                                                                                                                                                                                                                                                                       Epstein Barr virus nuclear antigen 1 protein (EBNA1) DNA
                                                                                                                                                                                                                                                                                                                                     07-NOV-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                              AAA50254 standard; DNA; 1926 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1925 BP;
                                                        Horlick RA, Chelsky D;
                                                                                    (PHAR-) PHARMACOPEIA INC.
                                                                                                                                             11-FEB-2000; 2000WO-US03547.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               131 GCCCAGATAGACGCCCCGGCGCCCCGGGTCCTGGAGTCCCCGCCGCCTGCTGCCCGGCCG 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              251 CCCGCAGCATGAACCCCCGCCGGCGGCCAGCCTCCTGTACAGCCCGCCGCCCCTGCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191 AGGACCCCACCCCGCCTGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTA 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTCCTGCTCCTGCCCCTCCTGCTCCTGCCCCCT 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCCATGCTGC - ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amplification, cell immortalisation, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                 99US-0249585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       486 A; 352 C; 872 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12.0%;
50.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 60;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       215 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 20; Length 1925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .003;
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ID AAF82902 standard; DNA; 1926 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and the selective pressure specified by the marker is maintained. Under these conditions, only cells containing both episomes live. Preferably, EBNA1 is expressed from 1 of the episomes and the protein of interest from the other episome. Either or both episopes may further comprise a nucleic acid sequence encoding a protein desired to be expressed in the cell (e.g. a therapeutic protein), a nucleic acid encoding an RNA that is not intended to be translated (e.g. a therapeutic RNA), or a DNA sequence used as a tag for the cells. The method is applicable to cell culture or intact organisms, for gene therapy. It allows the rapid establishment of eukaryotic cells that stably and reliably express a gene of interest, using a novel method of selection, and maintenance of that selection without the need for exogenous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         comprising an EBV oriP and a gene encoding a second protein, where expression of the second protein prohibits the occurrence of cell death resulting from expression of the first protein to produce doubly transfected cells which also express an antigen that promotes retention of the episomes by the cells. The doubly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is that of DNA encoding the Epstein-Barr virus (EBV) nuclear antigen protein 1 (EBNA1, see AAY95856). EBNA1 is utilised in a novel method for obtaining a eukaryotic cell that is stably transfected with at least one episome. This method involves transfecting a eukaryotic cell with: (1) a first episome comprising an EBV origin of replication (oriP, see AAA50253), a gene encoding a first protein whose expression results in cell death and a selectable marker for anixarvatic coll.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1926 BP; 487 A; 352 C; 872 G; 215 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stably transfecting eukaryotic cells with at least one episome for the production of a desired protein in vitro and for gene therapy -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                selection factors, such as antibiotics.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Fig 2; 53pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transfected cells are maintained under conditions in which the first and second proteins and the selectable marker are expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    selectable marker for eukaryotic cells; and (2) a second episome
                                                                                                                    338
                                                                                                                                                               430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
                                                                                                                                                                                                                                                                                                                                                    311 CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCCGCCGCCATACCCTGCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               131 GCCCAGATAGACGCCCCGGCGCCCCGGGTCCTGGAGTCCCGCCGCCTGCTGCCCGGCCG 190
                                                                                                                                                                                                                                                                                                                                                                                                                                               251 CCCGCAGCATGAACCCCCGCCGGCGGCGGCCAGCCTCCTGTACAGCCCGCCGCCCCCTGCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                       CCTCCTGCTCCTGCCCCTCCTGCTCCTGCCCCT
                                                                                                                                                                                                              AGGACCCCACCCCGCCTGCCGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 60;
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29-JUN-2001

(first entry)

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                                                                                                                                                                                                                                                                                                                                                                                                                   The invention provides a composition comprising nucleic acid, histone HI protein and expression vector operationally encoding a protein suitable for tethering the nucleic acid to the histone HI protein, where the tethering protein is LANA. The composition is useful in aiding the retention of the viral DNA in the host call. The viral vector encodes a protein suitable for tethering DNA to Histone HI. Methods for screening for compounds which are agonistic or antagonistic for the tethering of viral proteins to histone HI and DNA binding sites are useful for developing the method of viral transfer. The composition has applications to gene therapy, including the treatment of multiple sclerosis. Parkinson's disease, Huntington disease and diabetes. The present the nucleotide sequence of the Epstein-barr virus (EBV) tethering protein ENNAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Histone H1; tethering protein; LANA; gene therapy; multiple sclerosis; Parkinson's disease; Huntington disease; diabetes; human herpesvirus E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A composition for use in gene therapy comprises an expression vector that includes a nucleic acid sequence encoding a nucleic acid binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Robertson ES,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Epstein-barr virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EBV; latency-associated nuclear antigen; LANA; EBNA1; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EBV tethering protein EBNA1 encoding DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 9C; 60pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1926 BP; 487 A; 352 C; 872 G; 215 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P-PSDB; AAB62332
                                                                                                                                                                                               191 AGGACCCCACCCCGCCTGCCGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTA 250
                                                                                                                                                                                                                                                                  131 GCCCAGATAGACGCCCCGGCGGCCCCCGGGTCCTGGAGTCCCGGCCGCCTGCTGCCCGGCCG 190
Local
                                                                                                 CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT 369
                                                                                                                                 2001-281736/29
                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cotter MA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0410399
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                                                                                                                                                                                                                                                                                                                                 12.0%; Score 60; DB 22
50.6%; Pred. No. 0.003;
tive 0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                              DB 22; Length 1926;
                                                                                                                                                                                                                                                                                                                                 165; Indels
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RESULT 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence represents the Epstein Barr nuclear antigen. It is used to produce bait vectors of the invention. The specification describes a compositions and methods for a genetic system of detecting protein-protein interactions in a mammalian host cell. The system comprises bait and test, both containing selection genes, and viral origin of replications which require bound viral replication proteins to effect replication. The compositions is useful for detecting an interaction between a bait protein and a test protein. It is useful in a mammalian two-hybrid system for detecting protein-protein interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Composition for detecting protein protein interactions in a mammalian two hybrid system comprises bait and test vector which consist of selection gene, vector viral origin of replication and fusion gene \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Origin of replication; protein-protein interaction; replication; two-hybrid system; nuclear antigen; ss.
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                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2580 BP; 632 A; 512 C; 1054 G; 382 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Column 17-20; 18pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-593546/56.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (RIGE-) RIGEL PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Epstein-barr virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleotide sequence of the Epstein Barr nuclear antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JAN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in a mammalian host cell.
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311 CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCCTGCCGGCCATACCCTGCCTTCT 369
                                                                                                                              191 AGGACCCCACCCCGCCTGCCGCCGATGCTTGCAGTGGGCCCGCCATGGACAGGGATTA 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                         131 GCCCAGATAGACGCCCCGGCGGCCCCCGGGTCCTGGAGTCCCGCCGCCTGCTGCCCGGCCG 190
                                                                                                                                                                                               CCCGCAGCATGAACCCCCGCCGGCGGGCAGCCTCCTGTACAGCCCGCCGCCCCTGCAGAG 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Payan D, Huang B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9805-0050863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0050863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches 165; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 60; 1
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 21; Length 2580;
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RESULT 13
The present sequence is an anti-sense strand of commercially available plasmid pcWyEBNA from which Epstein Barr Virus Nuclear Antigen 1 (EBNA 1) encoding DNA is obtained. EBNA 1 protein is used to stably maintain episomes containing EBV origin of replication (orip) and a gene encoding protein or RNA of interest. Eucaryotic host cells expressing EBNA 1 protein are transfected with these episomes to produce recombinant cell lines expressing multiple genes of interest. This provides a rapid and reliable method of stably expressing multiple genes in transfected cells. The episomes are useful in the transfection of genes encoding receptors, transporter proteins, ion channels, adhesion molecules and transcription factors. The episomes carrying desired genes can also be used to transfect cells in gene therapy, antisense therapy, con gene amplification, cell immortalisation, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anti-sense strand; plasmid pcMVEBNA; EBNA 1; episome; transfection; Epstein Barr Virus Nuclear Antigen 1; origin of replication; EBV orip; eucaryotic host cell; recombinant cell line; ion channel; multiple gene expression; receptor; transporter protein; gene therat transcription factor; adhesion molecule; antisense therapy; gene amplification; cell immortalisation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-610610/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Damaj BB, Horlick RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-MAR-1998;
06-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cytomegalovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; Fig 1; 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful for gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New method for expressing genes from recombinant eukaryotic cells,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (PHAR-) PHARMACOPEIA INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9947647-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Epstein-barr virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Anti-sense strand of pCMVEBNA plasmid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-JAN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAX90923 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721 CCTCCTGCTCCTGCCCCCTCCTGCCCCCT 686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0130114
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (3032..4957)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag» a
/product= "EBNA 1 protein"
/note= "Epstein Barr Virus Nuclear Antigen 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene therapy;
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Sequence 5452 BP; 1108 A; 1736 C; 1246 G; 1362 T; 0 other;

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VQ
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This invention describes a novel method for generating an antisense library targeted to a selected RNA transcript. The methods can be used for identifying antisense agents and for identifying target sites for antisense redated inhibition of a selected gene. The use of a direct library for target site selection significantly simplifies the screening process, since only very small libraries need be prepared and assayed This sequence represents the vector pShuttle which is used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1964
                                                                                                                       Claim 16; Page 43-50; 63pp; English.
                                                                                                                                                   Production of antisense libraries, used for identifying antisense agents and for identifying target sites for antisense-mediated inhibition of a selected gene .
                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                          WPI; 1999-610866/52.
                                                                                                                                                                                                                                    Ruffner DE, Pierce ML,
                                                                                                                                                                                                                                                             (UTAH ) UNIV UTAH RES FOUND.
                                                                                                                                                                                                                                                                                          28-MAR-1998;
06-NOV-1998;
                                                                                                                                                                                                                                                                                                                                 28-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                              07-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                          inhibition;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vector pShuttle DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-JAN-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Antisense; DNA library; identification; multiple cloning site; MCS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            311 CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 251 CCCGCAGCATGAACCCCCGCCGGCGGGGGCAGCCTCCTGTACAGCCCGCCGCCGCCCCTGCAGAG 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      191 AGGACCCCACCCCGCCGCCCGCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTA 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           170;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                          98US-0107504
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Pred. No. 0.003
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 Matches 170;
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                                                                                                                                                                                                                          Chimeric - Adeno-associated virus. Chimeric - Cytomegalovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              7829
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 8705 BP; 1875 A; 2575 C; 2078 G; 2177 T; 0 other;
                                                                                              repeat_unit
                                                                                                                                                                                                                   Chimeric - Bos taurus.
                                                                                                                                                                                                                                                              gene therapy; vaccine; polycationic agent; ss.
                                                                                                                                                                                                                                                                      Polynucleotide delivery; plasmid pCMVKmITR-EPI; vector;
                                                                                                                                                                                                                                                                                        Vector plasmid pCMVKmITR-EPI.
                                                                                                                                                                                                                                                                                                          17-AUG-1998 (first entry)
                                                                                                                                                                                                                                                                                                                            AAV21683;
                                                                                                                                                                                                                                                                                                                                             AAV21683 standard; DNA; 9600
                                                                                                                                                                                                                                                                                                                                                                                        7949 CCTCCTGCTCCTGCCCCTCCTGCTCCTGCCCCT 7984
 WO9806437-A2
                                                            promoter
                                                                                                                                  repeat_unit
                                                                                                                                                             misc_feature
                                    terminator
                                                                                                                                                                                                                                                                                                                                                                                                        430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191 AGGACCCCACCCCGCCTGCCCCGATGCTTGCAGTGGGGCCCGCCATGGACAGGGATTA 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       131 GCCCAGATAGACGCCCCGGCCGCCGCGTCCTGGAGTCCCGCCGCCTGCTGCCCGGCCG 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCTGCCGATACCCTGCCTTCT 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Epstein-Barr virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                   6818..7050
                                                            5112..6734
                                                                                                                                  4928..5104
                                                                                                                                                                                               Location/Qualifiers
                                                                     /rpt_type= INVERTED /note= "AAV inverted
                                                                                                        /rpt_type= INVERTED
/note= "AAV inverted terminal repeat"
                                          /*tag= e
/note= "CMV immediate-early enhancer/promoter"
                                                                                                                                          'note- "EBV origin of replication"
                                                                                                                                                                     /*rag= a
/product= "EBV nuclear antigen A"
                                                                                                .89..7355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12.0%;
                 "bovine growth hormone polyA sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches 165; Indels
                                                                      inverted terminal repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 60; DB 20
Pred. No. 0.003;
                                                                                                                                                                                                                                                                                                                                             BP.
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Search completed: October 10, 2002, 15:17:31
                                                                                                                                                                                                                                             Matches 170;
                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 77-80; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1998-159296/14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-AUG-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Murphy JE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-FEB-1998
                                                                                                                                                                                                           1067
                                                                                                                                    947
                                           430 ACACCAGCTATGCCCCCGTGGCCACCGCCTCCAGCT 465
                            767 CCTCCTGCTCCTGCCCCCCTCCTGCTCCTGCCCCT 732
                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dubois-Stringfellow N,
                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tetsuo U,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96US-0023867
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                                                                                                                                                                                                                                                    12.0%; 50.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zukermann R;
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                                                                                                                                                                                                                                                     Score 60;
Pred. No.
                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dwarkí V,
                                                                                                                                                                                                                                                      .003;
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selectable marker. Polynicleofides encoding polypeptides, such as erythropoietin or leptin, and ribozymes and antisense polynucleotides can be inserted into the vector. The vector is preferred for use in novel compositions and methods for improved polynucleotide delivery into cells. In these methods, polycationic agents are used to increase the frequency of uptake of a nucleic acid (see also ANV21684-86) into a cell. The polycationic agent can condense with the nucleic acid and inhibit serum and/or nuclease degradation of the nucleic acid. The nucleic acid can be a vector, may express a therapeutic protein or a vaccinating viral or cancer antigen, or is itself therapeutic (antisense or ribozyme). The methods and compositions can be used in the gene therapy of many diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pCMYKMITR-EPI, which contains an Epstein-Barr virus (EBV) origin of replication from plasmid pCEP4, a coding region for EBV nuclear antigen A from pCEP4, a pair of inverted terminal repeats from adeno-associated virus, a cytomegalovirus enhancer/promoter, a bovine growth hormone polya sequence, and a kanamycin resistance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Polycationic agents based on alpha-amino acids, able to complex with nucleic acid - to facilitate its entry into cell, condense and protect it against serum degradation, particularly for use i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 9600 BP; 2326 A; 2376 C; 2817 G; 2081 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This polynucleotide comprises the DNA sequence of vector plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              311 CGCCATGCTGC-ACTGCCCCTACTGGAACACCTTCTCGCTGCCGCCATACCCTGCCTTCT
                                                                                                                                                                                                                                                                                                                                                                                          251 CCCGCAGCATGAACCCCCGCCGGCGGCAGCCTCCTGTACAGCCCGCCGCCCCCTGCAGAG 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 19; Length 9600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 165; Indels
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Gaps

Job time : 103 secs

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Total number of hits satisfying chosen parameters:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perfect score:
                                                                                                                                            0 0 0 0 0 0 0 0 0 0
        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                     31.8
31.8
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    Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/baCOMB.seq:*
5: /cgn2_6/ptodata/2/ina/pcruS_comB.seq:*
5: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
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Listing first 45 summaries
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Copyright (c) 1993 - 2002 Compugen Ltd.
                 1 US-08-287-442-3

1 US-08-459-701-3

1 US-08-459-174-3

1 US-08-459-174-3

1 US-08-761-258-1

2 US-08-37-306-1

2 US-08-343-443B-106

2 US-08-343-443B-106

2 US-08-343-443B-106

2 US-08-343-443B-106

2 US-08-351-352A-8

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9 4 US-08-312-168-4

9 4 US-08-312-168-4

1 US-08-312-463-1

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0 1 US-08-317-121-15

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0 3 US-08-312-168-4

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0 5 US-08-312-543-1
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Sequence 3, Appli
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Sequence 1, Appli
Sequence 106, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 8, Appli
Sequence 1, Appli
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5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5 8	5.8
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US-08-450-562-8	US-08-949-386-8	US-08-149-097D-8	US-08-223-305C-8	US-08-193-078B-8	US-08-455-543A-8	US-08-456-200B-11	US-08-456-200B-5	US-07-975-526-4	US-08-936-165A-142	US-09-150-864A-7	US-08-236-918A-7	US-08-816-605-1	PCT~US96~03965-7	PCT-US94-10457-1	US-09-007-097-1	PCT-US96-03940-1	PCT-US96-03940-7
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## ALIGNMENTS

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RESULT 1
US-08-287-442-3
APPLICATION NUMBER: US 07/908,284
PRIOR DAYE: 02-UUL-1992
PRIOR APPLICATION DAYA:
APPLICATION NUMBER: US 07/570,184
FILING DAYE: 08-NG-1990
ANTORNEY/AGENT INFORMATION:
NAME: Elmer, James Scott
REGISTRATION NUMBER: US 0129
REFERENCE/DOCKET NUMBER: CGC 1506/C:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8614
TELEPHONE: 919-541-8614
INFORMATION FOR SEQ 1D NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 5559 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Gaffney, Thomas D.
APPLICANT: Lam, Stephen T.
APPLICANT: Ligon, James M.
APPLICANT: Hill, Dwight S.
APPLICANT: Stein, Jeffrey I.
APPLICANT: Howell, Charles R.
APPLICANT: Becker, J. Ole
TITLE OF INVENTION: Gene Activating Element
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFFWARE: PAI-ENTIN Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/287,442
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/087,636
FILING DATE: 01-JUL-1993
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: CIBA-GEIGY Corporation STREET: 7 Skyline Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3, Application US/08287442
o. 5670350
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Release #1.0, Version #1.25
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STRANDEDNESS: single TOPOLOGY: linear

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US-08-459-701-3
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Conserv
                                                                                                                                                                                                                                                GENERAL INFORM
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                      Sequence 3, Application US/08459701 Patent No. 5686282 GENERAL INFORMATION:
                                                                            NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: CIBA-GEIGY CC
STREET: 7 Skyline Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
NAME/KEY: misc_feature
15318
15318
1501
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1258 AGCTGCGCCTTGAACTGCGCACCACGCTGTTCCAGGTGCAACAGTCCGGTGTTGCGGTGA 1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1198 GGTTCCTGCGCTATGTCGCGGGGGAAATCACCCGCAACCTGCTGACCCTGATCCAGCCCG 1257
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               169 TGCTGAGGATGGCCTGGTCTGCCACCCTCCTCGAGTAGCATTTTTGCATGTGTAACAGGGT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109 GATTGGTGTGATTTGATGCTGACGGGAGTGAGAGTAATGGCCTTATCCTGCTGCAGGCTG 168
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                                                                                                                                                                                                                                                                                                                                                                                                                                         229 CTCCCCTCTGGGGCACAACAACAAGAGAAGTTGC 263
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local 5
                           COUNTRY:
                                                 STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: 4731..5318
OTHER INFORMATION: /note= "ORF 3, transcribed right to
OTHER INFORMATION: left"
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OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc_feature
LOCATION: 210..1688
OTHER INFORMATION: /not
OTHER INFORMATION: righ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature LOCATION: 4616..4691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INDIVIDUAL ISOLATE: 5.6 kb EcoRI-HindIII restriction INDIVIDUAL ISOLATE: fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM:
                 10532
                                             Hawthorne
New York
                                                                                                                                             f: Becker, J. Ole
INVENTION: Gene Activating Element
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       рсів137
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CGA267356
                                                                                                                                                                                                 Lam, Stephen T.
Ligon, James M.
Hill, Dwight S.
Stein, Jeffrey I.
                               USA
                                                                                                                                                                                                                                                                  Gaffney, Thomas D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                 Howell, Charles R.
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1906..3633
                                                                                            CIBA-GEIGY Corporation
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50.38;
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right"
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right"
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                                                                                                               Matches
                                                                                                                                               Query Match
                                                                                                                              Best Local
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TELEPHONE: 919-541-8614
TELEPAX: 919-541-8689
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                      1198 GGTTCCTGCGCTATGTCGCGGGGGAAATCACCCGCAACCTGCTGATCCTGATCCAGCCCG 1257
                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION:
OTHER INFORMATION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 0 FILING DATE: 08-AUG-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 02-JUL-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 01 FILING DATE: 01-JUL-1993 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: 11
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
169 TGCTGAGGATGGCCTGGTCTGCCACCCTCGTGGTAGCATTTTGCATGTGTAACAGGGT 228
                                                                    109 GATTGGTGTGATTTGATGCTGACGGGAGTGAGAGTAATGGCCTTATCCTGCTGCAGGCTG 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ANTI-SENSE: NO
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LOCATION: 210..1688
OTHER INFORMATION: /note=
OTHER INFORMATION: right"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Elmer, James Scott
REGISTRATION NUMBER: 36,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                              OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature LOCATION: 4616..4691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 0 FILING DATE: 08-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/0 FILING DATE: 02-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 07/908,284
                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pciB137
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CGA267356
                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UMBER: US 07/570,184
08-AUG-1990
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left"
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                                                                                                                           Score 31.8; DB 1; Length 5559; Pred. No. 1.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "ORF 1, transcribed left to
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                                                                                                        77;
                                                                                                            0;
                                                                                                            Gaps
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US-08-460-298-3
                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMUTER READABLE FORM:

REDUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

COMPUTER READABLE FORM:

COMPUTER: IBM PC COMPATIBLE

COMPUTER: IBM PC COMPATIBLE

COMPUTER: IBM PC COMPATIBLE

COMPUTER: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION UNMBER: US/08/460,298

FILING DATE: 02-JUN-1995

CLASSIFICATION NUMBER: US 08/287,442

APPLICATION NUMBER: US 08/287,442

APPLICATION NUMBER: US 08/087,636

PRIOR APPLICATION NUMBER: US 08/087,636

FILING DATE: 01-JUL-1993

PRIOR APPLICATION NUMBER: US 07/908,284

FILING DATE: 02-JUL-1993

PRIOR APPLICATION NUMBER: US 07/908,284

FILING DATE: 02-JUL-1992

PRIOR APPLICATION NUMBER: US 07/908,284

FILING DATE: 08-AUG-1990

ATTORNEY/AGENT INFORMATION:

NAME: Elmer, James Scott

REGISTRATION NUMBER: GC 1506/CTP4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence 3, Application US/08460298 Patent No. 5686283
                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-541-8614
TELEPAX: 919-541-8689
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 559 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
GENERAL INFORMATION:
GAIFINEY: Lam, Stephen T.
APPLICANT: Ligon, James M.
APPLICANT: Ligon, James M.
                                                                                                                                                                                      TYPE: SIRALENESS: SIRY
STRANDENESS: SIRY
TOPOLOGY: linear
MOLECULE TYPE: DNA
--~~UFFTICAL: NO
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                      INDIVIDUAL ISOLATE:
INDIVIDUAL ISOLATE:
IMMEDIATE SOURCE:
CLONE: pCIB137
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Stein, Jeffrey I.
APPLICANT: Howell, Charles R.
APPLICANT: Becker, J. Ole
TITLE OF INVENTION: Gene Activating Element
                                                                                                                                                     ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                       ORGANISM: Pseudomonas fluorescens STRAIN: CGA267356
                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: CG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: CIBA-GEIGY Corporation STREET: 7 Skyline Drive
                                                                                                                                                                           SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hill, Dwight S.
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                                                                                                                                                                                                                 DNA (genomic)
                                                               fragment
                                                                                        5.6 kb EcoRI-HindIII restriction
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OTHER INFORMATION: /note= "ORF 3, transcribed right to OTHER INFORMATION: left"
US-08-460-298-3
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Best Local S
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APPLICANT:
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APPLICANT: Hill, Dwight S.
APPLICANT: Stein, Jeffrey I.
APPLICANT: Howell, Charles R.
APPLICANT: Becker, J. Ole
TITLE OF INVENTION: Gene Activating Element
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
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PRIOR APPLICATION NATA:
APPLICATION NUMBER: US 08/287,442
FILING DATE: 08-AUG-1994
APPLICATION NUMBER: US 08/087,636
FILING DATE: 01-JUL-1993
                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169 TGCTGAGGATGGCCTGGTCTGCCACCCTCCTCGAGTAGCATTTTGCATGTGTAACAGGGT 228
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CITY: F
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OTHER INFORMATION: /noi
OTHER INFORMATION: rigi
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OTHER INFORMATION:
OTHER INFORMATION:
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                                                                                                                                   APPLICATION NUMBER: FILING DATE: 02-JU
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ZIP: 10532
                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: CIBA-GEIGY Corporation STREET: 7 Skyline Drive CITY: Hawthorne
                                                                                                               CLASSIFICATION:
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al Similarity 50.3%;
78; Conservation
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Lam, Stephen T.
                                                                                                                           UMBER: US/08/459,174
02-JUN-1995
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left"
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right"
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Pred. No. 1.3;
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RESULT 5
PCT--US93-06300A-3
; Sequence 3, Application PC/TUS9306300A
; GENERAL INFORMATION:
; APPLICANT: CIBA-GEIGY AG
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US-08-459-174-3
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Cocal Similarity
Conserv
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TELEPAX: 919-541-8689
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:

NAME/KEY: misc_feature
LOCATION: 1906..3633
LOCATION: /not
                                                                                                                                    1318 CCGCCGCCGGGTGCGCATCGAGCGGGAAAAGAAGC 1352
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NAME/KEY: misc_feature
LOCATION: 4616..4691
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Pseudomonas fluorescens
STRAIN: CGA267356
INDIVIDUAL ISOLATE: 5.6 kb EcoRI-H
INDIVIDUAL ISOLATE: fragment
INDEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGI.
MOLECULE TYPE: DN
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TELEPHONE: 919-541-8614
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ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
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US 07/908,284
                                                                                                                                                                                                                                               169 TGCTGAGGATGGCCTGGTCTGCCACCCTCCTCGAGTAGCATTTTGCATGTGTAACAGGGT 228
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ANTI-SENSE:
                                                                                                                                                                        229 CTCCCCTCTGGGGCACAACAACAAGAGAAGTTGC 263
                                                                                                                                                                                                                                                                                                                                                  Local 78;
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OTHER INFORMATION:
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OTHER INFORMATION: right"
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LOCATION: 210:.1688
OTHER INFORMATION: /note= "ORF 1, transcribed left to
OTHER INFORMATION: right"
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STRANDEDNESS: single
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REGISTRATION NUMBER: 36,129
REFERENCE/DOCKET NUMBER: CGO
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                                                                                                                                                                                                                                                                                                                                                                             50.38;
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                                                                                                                                                                                                                                                                                                                                                             Score 31.8; DB 1; Length 5559; Pred. No. 1.3; 0; Mismatches 77; Indels 0
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                                                                                                                                                                                                                                                                                                                                                             Gaps
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/908,284
EILING DATE: 02-UU-1992
ATTORNEY/AGENT INFORMATION:
NAME: SPULILI, W. MUITAY
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: S-18210/A/
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFONE: 9191541-8615
TELEFONE: 9191541-8615
INFORMATION FOR SED ID NO: 3:
                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 5559 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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                                                                                                                                                                   MOLECULE TYPE:
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MEDIUM TYPE: Floppy
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CORRESPONDENCE ADDRESS:
ADDRESSEE: CIBA-GEIGY Corporation
                                                                                                                               HYPOTHETICAL:
                      IMMEDIATE SOURCE
                                                                                                                ORIGINAL SOURCE:
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                                   STRAIN: CGA267356
INDIVIDUAL ISOLATE:
INDIVIDUAL ISOLATE:
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                                                                                           ORGANISM:
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pCIB137
                                                                         M: Pseudomonas fluorescens
CGA267356
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120 Marquette Dr
Cary, NC 27513
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4002 Basle
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Chapel Hill, NC 27
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Raleigh, NC 27613
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725 Surry Trail
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                                   fragment
                                                          5.6 kb EcoRI-HindIII restriction
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US-08-761-258-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1258 AGCTGCGCCTTGAACTGCGCACCACGCTGTTCCAGGTGCAACAGTCCGGTGTTGCGGTGA 1317
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                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS: 11
ADDRESSEE: Clba-Ceigy Corporation
STREET: 520 White Plains Road, P.O. Box 2005
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NAME/KEY: misc_feature
LOCATION: 210..1688
OTHER INFORMATION: /note= "ORF 1, transcribed left to
OTHER INFORMATION: right"
             ATTORNEY/AGENT INFORMATION:
NAME: Me198, J. Timothy
REGISTRATION NUMBER: 38,241
TELECOMMUNICATION INFORMATION:
                                                                                                                                               SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA
                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169 TGCTGAGGATGGCCTGGTCTGCCACCCTCCTCGAGTAGCATTTTTGCATGTGTAACAGGGT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             229 CTCCCCTCTGGGGCACAACAACAAGAGAAGTTGC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 GATTGGTGTGATTTGATGCTGACGGGAGTGAGAGTAATGGCCTTATCCTGCTGCAGGCTG 168
                                                                                                                                                                                                                                                                                              STATE: NY
                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: /note-
OTHER INFORMATION: left"
                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: /note= "ORF 3, transcribed right to OTHER INFORMATION: left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature
LOCATION: 4731..5318
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LOCATION: 1906..3633
                                                                                         CLASSIFICATION: 424
                                                                                                                                                                                                                                                                 COUNTRY: (
ZIP: 10591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
TELEPHONE:
                                                                                                             FILING DATE:
                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
LOCATION: 4616.4691
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , Application US/08761258 5756087
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ligon, James M.
Hill, Dwight S.
Lam, Stephen T.
Gaffney, Thomas D.
                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                     Torkewitz, Nancy
VENTION: Genetically Modified Pseudomonas Strains
VENTION: Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
(919) 541-8587
                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.4%; Score 31.8; D: 50.3%; Pred. No. 1.3; tive 0; Mismatches
                                                                                                                                                                 Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "ORF 2, transcribed left to
                                                                                                                               us/08/761,258
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INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
LENGTH: 10763 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE: MISC_feature LOCATION: 210..1688
OTHER INFORMATION: /prod OTHER INFORMATION: /note OTHER INFORMATION: respe
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NAME/KEY:
LOCATION:
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1258 AGCTGCGCCTTGAACTGCGCACCACGCTGTTCCAGGTGCAACAGTCCGGTGTTGCGGTGA 1317
                                                                             1198 GGTTCCTGCGCTATGTCGCGGGGGAAATCACCCGCAACCTGCTGACCCTGATCCAGCCCG 1257
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OTHER INFORMATION: /fu
OTHER INFORMATION: reg
OTHER INFORMATION: /pr
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OTHER INFORMATION: uvr
OTHER INFORMATION: uvr
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CLONE: Plasmid pEll
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OTHER INFORMATION:
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OTHER INFORMATION:
                                       169 TGCTGAGGATGGCCTGGTCTGCCACCCTCCTCGAGTAGCATTTTGCATGTGTAACAGGGT 228
                                                                                                                     109 GATTGGTGTGATTTGATGCTGACGGGAGTGAGAGTAATGGCCTTATCCTGCTGCAGGCTG 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: complement (4616..4691)
OTHER INFORMATION: /product= "tena"
OTHER INFORMATION: /note= "(complementary DNA strand) Homology to glyW from E
OTHER INFORMATION: Coll."
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STRAIN:
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                                                                                                                                                                             Local
                                                                                                                                                             78;
                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l: Pseudomonas fluorescens
CGA267356 (aka MOCG134 and aka BL915)
                                                                                                                                                             Conservative
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                                                                                                                                                                             50.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "sensor kinase"
/note= "Coding sequence for sensor kinase has homology to rcsC, frzE, and bvgS genes of E. coli, M. Xanthus, and Borditella pertussis, respectively."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product- "methyltransferase"
/note- "Coding sequence for methyltransferase has homology
the cheR and frzF genes from E. coli and Myxococcus xanthu
respectively."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 atidyltrans."

/note= "Coding sequence for
CDP-dlacylglycerol-glycerol-3-phosphate-3-phosphatidyltran
se has homology to pgsA."
                                                                                                                                                                                                                                                      regulator/transcription activator"
/product= "gacA (aka gafA)"
/note= "Coding sequence for gacA (aka gafA) has homology t
uvry and gacA genes of E. coli and Ps. fluorescens,
respectively."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product= "UVR exonuclease subunit C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "CDP-diacylglycerol-glycerol-3-phosphate-3-phosph
                                                                                                                                                                                                                                                                                                                                                         /function= "response
                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Coding sequence for UVR exonuclease subunit C has homology to uvrC."
                                                                                                                                                             0;
                                                                                                                                                                             Score 31.8; DB 1; Length 10763; Pred. No. 1.9;
                                                                                                                                                             Mismatches
                                                                                                                                                        77;
                                                                                                                                                             Indels
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RESULT 7
US-08-977-306-1
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SEQUENCE CHARACTERISTICS:
LENGTH: 10763 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
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HYPOTHETICAL: N
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         quence 1, Application US/08977306
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LOCATION: 1996..3633
OTHER INFORMATION: /prod
OTHER INFORMATION: /note
OTHER INFORMATION: Bordi
                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature
LOCATION: 210..1688
OTHER INFORMATION: /prod
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APPLICANT: Hill, Dwight S.
APPLICANT: Gaffney, Thomas D.
APPLICANT: TorkewAtz, Nancy
APPLICANT: Stafford, Jill M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMMEDIATE SOURCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1318
                                 NAME/KEY:
LOCATION:
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ZIP: 27
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LOCATION: complement (4616..4691)
OTHER INFORMATION: /product= "tRNA"
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COMPUTER: II
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FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : Pseudomonas fluorescens
CGA267356 (aka MOCG134 and aka BL915)
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                                                                                                                                                                                                                                                                                                                    /product= "methyltransferase"
/note= "Coding sequence for methyltransferase has homology t
the cher and frzF genes from E. coli and Myxococcus xanthus,
respectively."
                                                                                                              /product= "sensor kinase"
/note= "Coding sequence for sensor kinase has homology to the rcsC, frzE, and bygS genes of E. coli, M. Xanthus, and Borditella pertussis, respectively."
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OTHER INFORMATION: /function= "response in Tesponse in The Information coulator/transcription of the Information: /product= "gaca (aka gaf of the Information in the Information court and gaca genese in the Information in the Information court and gaca genes of E of the Information in the Information court in the Information 
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Best Local Similarity 50.3%;
Matches 78; Conservative
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APPLICANT:
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APPLICANT:
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APPLICANT:
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TITLE OF INVENTION: NUCLEIC ACID CORRESPONDING TO A GENE OF
TITLE OF INVENTION: CHROMOSOME 22 INVOLVED IN RECUGRENT CHROMOSOMAL
TITLE OF INVENTION: TRANSLATIONS ASSOCIATED WITH THE DEVELOPMENT OF CANCEROUS
TITLE OF INVENTION: TUMORS, AND NUCLEIC ACIDS OF FUSION RESULTING FROM SAID
TITLE OF INVENTION: TRANSLOCATIONS
                                                                                                                                                                                        NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
COMPUTER READABLE FORM:
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                              COUNTRY: U
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OTHER INFORMATION:
                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION:
                                                                                                           Philadelphia
                                                                                   PΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aurrande, Orrandal
                                                                                                                                      E: Weiser & Associates
230 South Fifteenth Street
                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                            Ploougastel, Beatrice
Thomas, Gilles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Melot, Thomas
Peter, Martine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aurias, Alain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement (5574..7397)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ement (4731..5318)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /function= "résponse regulator/transcription activator" product= "gacA (aka gafA)" note= "Coding sequence for gacA (aka gafA) has homology tovry and gacA genes of E. coli and Ps. fluorescens, respectively."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product=
/product=
*CDP-diacylglycerol-glycerol-3-phosphate-3-phosph
atidyltrans."
/note= "Coding sequence for
CDP-diacylglycerol-glycerol-3-phosphate-3-phosphatidyltran
se has homology to pgsA."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Olivier
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                                                                                                                                                                                                                             129
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product= "UVR exonuclease subunit C"
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Pred. No. 1.9;
0; Mismatches
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Length 10763; Indels

COMPUTER: IF

E: Floppy disk IBM PC compatible SYSTEM: PC-DOS/MS-DOS

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US-08-343-443B-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 215-875-8394
INFORMATION FOR SEQ ID NO: 106;
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                               APPLICANT: Melot, Thomas
APPLICANT: Melot, Thomas
APPLICANT: Peter, Martine
APPLICANT: Plougastel, Beatrice
APPLICANT: Thomas, Gilles
APPLICANT: Thomas, Gilles
APPLICANT: Thomas, Gilles
APPLICANT: Thomas, Gilles
TITLE OF INVENTION: NUCLEIC ACID CORRESPONDING TO A GENE OF
TITLE OF INVENTION: CHROMOSOME 22 INVOLVED IN RECURRENT CHROMOSOMAL
TITLE OF INVENTION: TRANSLATIONS ASSOCIATED MITH THE DEVELOPMENT OF CANCEROUS
TITLE OF INVENTION: TRANSLOCATIONS
TITLE OF INVENTION: TRANSLOCATIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Weiser, Gerard J.
REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 988
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PCT/FR93/00.
FILING DATE: 19 MAY 1993
PRIOR APPLICATION DATA: RP 92/06123
APPLICATION NUMBER: FR 92/06123
FILING DATE: 20 -MAY 1992
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: AEDIT 1.0 DOS text editor
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/343,443B
FILING DATE: 18-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          415 GGCCGTGAAAGCCAGCCAACTGCCGCAAAATCACCCAGCCGATTGGGGGGTTTCCCATC 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             475 GG 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     154 GTCCGGAAAATCCTCCAGACTCCTGCCCATAAACACCCATGCTACTGGGGGTGGTCCTGTC 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94 GG 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 954 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: CDS
LOCATION: 1..!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                      ADDRESSEE: Weiser & Associates STREET: 230 South Fifteenth Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match 6.0%;
Local Similarity 67.7%;
                                                             COUNTRY:
                                                                                                   CITY: Philadelphia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:

    Application US/08343443B
    5968734

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                                          19102
                                                                             PA
                                                             USA
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Desmaze, Chantal
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Floppy disk
                                                                                                                                                                                     129
                                                                                                                                                                                                                                                                                                                                                                                                                                 Olivier
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    Mismatches

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Pred. No. 2;
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; LENGTH: 500
; TYPE: PRT
; ORGANISM: Human
US-09-141-000-2
                γΩ
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US-09-141-000-2/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09141000; Patent No. 6054295; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/141,000 CURRENT FILING DATE: 1998-08-26 NUMBER OF SEQ ID NOS: 30 SOFTWARE: FASTSEQ for Windows Version 3.0 SEQ ID NO 2
                                                                                                                                         Query Match 5.9%; Score 29.6; DB 3; Length 500; Best Local Similarity 8.4%; Pred. No. 1.9; Matches 38; Conservative 132; Mismatches 284; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Chen, Fang
TITLE OF INVENTION: DNA MOLECULES ENCO
TITLE OF INVENTION: RECEPTOR PROTEINS
FILE REFERENCE: 19999Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 215-875-8394 INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: AEDIT 1.0 DOS text editor
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 19,763
REFERENCE/DOCKET NUMBER: 9
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-875-8383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR93/00494
FILING DATE: 19-MAY-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 2371 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 20-MAY-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 886 GTCCGGAAAATCCTCCAGACTCCTGCCCATAAACACCCCATGCTACTGGGGTGGTCCTGTC 827
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            415 GGCCGTGAAAGCCAGCCAACTGCTGCCCAAAATCACCCAGCCGATTGGGGGGTTTCCCCATC 474
104 AATTAGATTGGTGTGATTTGATGCTGACGGGAGTGAGAGTAATGGCCTTATCCTGCTGCA 163
                                                       456 TYD..S.B....YW...SHTYTWTMT..K....MDK.BMC..MBSR.D.BIMTTA.Y... 397
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STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Weiser, Gerard J
REGISTRATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 18-NOT CLASSIFICATION: 51
                                                                                                  44 TTATGGGAACATTTGTCAGGCAAAAGTATAATAATGGCAAACTCTACGCCTTTTATTTTA 103
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2371 base pairs
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nilarity 67.7%;
Conservative (
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25..1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA MOLECULES ENCODING HUMAN NUCLEAR
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RESULT 12
US-08-050-132A-8/c
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; Sequence 8, Application US/08050132A
                                                                                                       Db 514554 GCGTGCCGAAAGTC 514541
                                                                                                                                                                                   Db 514674 GTTGACGCCTATGCTGGCGCCTTGGTGCAATGGCCAGTGCGGTGTTGGGTTCGCCGGTGGA 514615
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US-09-103-840A-2/c
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                      Matches
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: FLEISCHMAN, Robert D.
APPLICANT: WHITE, OWEN R.
APPLICANT: FRASE, Claire M.
APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM
TITLE OF INVENTION: TUBERCULOSIS
TILE REFERENCE: 24366-240007.00
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT APPLICATION NUMBER: US/09/103,840A
UNMBER OF SEQ ID NOS: 2
NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: CDC 1551
OTHER INFORMATION: "n" bases at various positions throughout the sequence OTHER INFORMATION: represent a, t, c or g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Mycobacterium tuberculosis
                                                                                                                                             435 TGCTGCCCAAAATC 448
                                                                                                                                                                                                                            315 GCTTACTCCAATGGCTGAGAGAGGTGCTATGGCCAGTCCTCCCAGAGCTCTGCAGCTGCA 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             156 .GSMYYYMA..G.NAT.GSR..NC..AYM..TMGT.GSTBCRDRCST.HCGB.G.YM..T 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        336 BM.MMRYYB....TYR....CT.YSD..HK.RH.TRB.MHHR..SYRB.C....KWTS. 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 164 GGCTGTGCTGAGGATGGCCTGGTCTGCCACCCTCCTCGAGTAGCATTTTTGCATGTGTAAC 223
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      344 TGGCCAGTCCTCCCAGAGCTCTGCAGCTGCACTTGGGGGTGGACAGTCTCGTGCTTGTCC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               216 .RSB.MA..MMT..S...S.R.SS.SH.YYMRM.YCCYBYH.YBC.M.KCBM.GMK.YGT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     276 ..SK.HC.S.SS.C..DMTWC..BB..YHT.HG.AA.TM.HC..KC...KTR.MH..TB. 217
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                                                                                                                                                                                                                                                                                                                                                                            Local
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                                                                                                                                                                                                                                                                                                                                        Similarity 52.2%;
70; Conservative (
                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                    Score 29.6; DB 4; Length 4403765; Pred. No. 54; o; Mismatches 64; Indels 0;
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US-08-050-132A-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (617) 876-5851 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 470 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: DN.
HYPOTHETICAL: NO
FRAGMENT TYPE: C --
ORIGINAL SOURCE:
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CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Kapinos, Ellen J.
REGISTRATION UNMERE: 32.245
REFERENCE/DOCKET NUMBER: GI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OKUANISM: Homo sapiens
CELL LINE: W138 (genom:
IMMEDIATE SOURCE:
LTRDADOW:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                      FEATURE:
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TELEPHONE: (617) 876-1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: WOZNEY, John M.
APPLICANT: Celeste, Anthony
TITLE OF INVENTION: BMP-9 COMPOSITIONS
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE
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452 CAGCC 456
                                        287 GCGTGTTTCGTCGGCGTCACATCGTCAGCCAAGGGGAAGAAGCAGCCGCCCTTACACTCG 228
                                                                          392 TCGTGCTTGTCCTGCGTGATAACGGCCGTGAAAGCCCAGCCAACTGCTGCCCAAAATCACC 451
                                                                                                                       347 ACACAGCAGCCTTGCCCACCTTTGTGGGGAACTTGAGATGCACCAGGGTCTGCACGATA 288
                                                                                                                                                                332 AGAGAGGTGCTATGGCCAGTCCTCCCAGAGCTCTGCAGCTGCACTTGGGGGGTGGACAGTC 391
                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
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STREET: Legal Affairs - 87 CambridgePark Drive
CCITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
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                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                            Similarity
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                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                    5.8%; Score 29; DB 1; Length 470; 52.0%; Pred. No. 2.9; ative 0; Mismatches 60; Indels
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227 TAGGC 223

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; LOCATION:
US-08-750-222A-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: KAPINOS, ELLEN J.
REGISTRATION NUMBER: 32,245
REFERENCE/DOCKET NUMBER: GI 5
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 876-1170
TELEPAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 8, Application US/08750222A Patent No. 6034061
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APPLICANT: WOZNEY, JOHN M.
APPLICANT: Celeste, Anthony J.
APPLICANT: Song, Jeffrey
APPLICANT: Thies, Scott
TITLE OF INVENTION: BMP-9 COMPOS
NUMBER OF SEQUENCES: 19
                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: DN/
HYPOTHETICAL: NO
FRAGMENT TYPE: C-1
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/254,353
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                                                   FEATURE:
                                                                                                                                                                                                                                            POSITION IN GENOME:
                                                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
LIBRARY: human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/750,222A FILING DATE: 04-DEC-1996 CLASSIFICATION: 435
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CITY: Cambridge
                                                                                                                                                                                                                                                                                                             ORGANISM: Homo sapiens CELL LINE: W138 (genom.
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                                  NAME/KEY:
                                                                   LOCATION:
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Legal Affairs - 87 CambridgePark Drive
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                                  mRNA
                1..470
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124..453
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                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (617) 876-1170
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 470 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ouery Match
Ouery Match
S.8%; Score 29; DB 3; Length 470;
Best Local Similarity 52.0%; Pred. NO 2.9;
Matches 65; Conservative 0; Mismatches 60; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: WOZNEY, JO
APPLICANT: Celeste,
APPLICANT: Song, Jefi
APPLICANT: Thies, R.
TITLE OF INVENTION: I
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: DNJ
HYPOTHETICAL: NO
FRAGMENT TYPE: C-TORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/815,652B
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: KAPINOS, Ellen J.
REGISTRATION NUMBER: 32,245
REGERRECE/DOCKET NUMBER: GI
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 876-1170
FEATURE:
NAME/KEY: CDS
                                                                            CLONE: lambda 11:
POSITION IN GENOME:
UNITS: bp
FEATURE:
                                                                                                                                  CELL LINE: W138 (genomic DNA)
IMMEDIATE SOURCE:
LIBRARY: human genomic library
CLONE: lambda 111-1
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                                                                                                                                                                                                                                                                                                                             LENGTH: 470 base pairs TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 514
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                                 NAME/KEY: exon
LOCATION: 1..470
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                                                                                                                                                                                                                 ORGANISM:
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Celeste, Anthony
Song, Jeffrey
Thies, R. Scott
VENTION: BMP-9 COMPOSITIONS
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: EBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PREENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/254,353A
FILING DATE:
APPLICATION: 435
ATTORNEY/ACENT INFORMATION:
10 AND 
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US-08-254-353A-8/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
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FEATURE:
NAME/KEY:
LOCATION:
FEATURE:
NAME/KEY:
LOCATION:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                        TOPOLOGY: linear
MOLECULE TYPE: DNA (genom:
HYPOTHETICAL: NO
FRAGMENT TYPE: C-terminal
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: ROSEN, VİCKİ A.
APPLICANT: WOZDEY, JOHN M.
APPLICANT: CCLESTE, ANTHONY J.
APPLICANT: SCHETE, ANTHONY J.
APPLICANT: SONG, Jeffrey
APPLICANT: Thies, Scott
APPLICANT: Thies, Scott
APPLICANT: Thies, Sott
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ADDRESSEE: Genetics
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NUMBER OF SEQUENCES:
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347 ACACAGCAGGCCTTGCCCCACCTTTGTGGGGAACTTGAGAGTCCACCAGGCTCTGCACGATA 288
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       CELL LINE:
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CITY: Cambridge
STATE: MA
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                                            ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
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Legal Affairs - 87 CambridgePark Drive
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FEATURE:
NAME/KEY:
LOCATION:
US-08-254-353A-8
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Search completed: October 10, 2002, 19:26:08 Job time: 2506.73 secs
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Best Local S
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POSITION IN GENOME:
UNITS: bp
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                                                                                                                                              392 TCGTGCTTGTCCTGCGTGATAACGGCCGTGAAAGCCAACCTGCTGCCCAAAATCACC 451
                                                             227 TAGGC 223
                                                                                           452 CAGCC 456
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                                                                                                                                                                                                                 332 AGAGAGGTGCTATGGCCAGTCCTCCCAGAGCTCTGCAGCTGCACTTGGGGGGTGGACAGTC 391
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Maximum Match 1008
Listing first 45 s
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
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Match
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500
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em_htc:*
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AZ344779
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AQ587521 CITBI E1-
AZ344779 1M0079E03
AZ128097 OSJNBD008
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B1889964 ZF637-1-0
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AUTHORS
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VERSION
KEYWORDS
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AQ587521
LOCUS
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ORGANISM
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 675)
Zhao, S., Adams, M.D., Nierman, W., Malek, J., Shizuya, H., Simon, M. and
                                                                                                           Demail: hbe@tigr.org
Clones are available from Research Genetics (info@resgen.com). BAC
end search page:
http://www.tigr.org/tdb/humgen/bac_end_search/bac_end_search.html.
Seq primer: M13-21
Class: BAC ends.
                                                                                                                                                                               Unpublished (1997)
Other_GSSs: CITBI-El-2643GI4.TR
Other_GSSs: CITBI-El-2643GI4.TR
CONTACT: Shaying Zhao, William Nierman, Mark Adams
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850
Tel: 301 838 0200
Fax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                   AQ587521 675 bp DNA linear GSS 07-JUN-1999 CITBI-E1-2643G14.TF CITBI-E1 Homo sapiens genomic clone 2643G14,
                                                                                                                                                                                                                                                                                          Venter,J.C.
Use of BAC End Sequences from CalTech Libraries for Sequence-Ready
                                                                                                                                                                                                                                                                                                                                                                                                               DNA sequence.
AQ587521
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/clone="2643G14"
/clone=lib="CITBI-E1"
/sex="male"
  /cell_type="sperm"
/note="Vector: pBeloBAC11; Site_1: EcoRI; Site_2: EcoRI;
                                                                                                Location/Qualifiers
                                                                                       . 675
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9 AI875988
10 W04925
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BF721846

AI119326

AI314561

BF012479

BF384957

BF3857564

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BF2355194
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BF721846 maa52c02.
AII1926 uf03c04.
AI314561 uJ48d10.
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BF738957 60204525
BF38957 60204525
BF389574 602045927
BF152113 602916509
BF235144 602026470
BF231810 602937071
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BG922396 602817123
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AI303148 ui60d04.y
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AI875988 uj53e11.y
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AI931317 ul67f07.y
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 429 AAGCTTGGTGCCATCTATTTTGGACTATGCCTTGCATACAGCTTTATGGGAACATTTGTC 488
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 AAGCTTGGTGCCATCTATTTTGGACTATGCCTTGCATACAGCTTTATGGGAACATTTGTC 60
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                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah
Rm. 308, Biomedical Polymers Research Bldg.,
                                                                                                                                                                                                                                                               Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error:
Plate: 0079 row: E column: 03
Seg primer: CGTTGTAAAACGACGGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Schurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 723)

Dunn,D., Aoyagi,A., Barber,M., Beacorn,T., Duval,B., Hamil,C., Islam,H., Longacre,S., Mahmoud,M., Meenen,E., Pedersen,T., Reilly,M., Rose,M., Rose,R., Stokes,R., Tingey,A., von Niederhausern,A., and Wright,D.,Weiss,R.
                                                                                                                                                                                                                          High quality
                                                                                                                                                                                                                                                                                                                                                Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AC344779 723 bp DNA linear GSS 29-SEP-20 1M0079E03F Mouse 10kb plasmid UUGC1M library Mus musculus genomic clone UUGC1M0079E03 F, DNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (2000)
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                                                                                                                                                                                                                                                 plasmid ends
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/lab_host="E. Coli strain XL10-Gold, T1-resistant, F-" /note="Vector: PWD42nv; Purified genomic DNA from M. musculus C57BL/6J (male) was obtained from the Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CalTech Human BAC Library D"
a 134 c 162 g 206 t
                                                                                                   /organism="Mus musculus"
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/db_xref="taxon:10090"
/clone="UUGC1M0079E03"
                                                                /sex="Male"
                                                                                                                                                                                                          Loca:
                                                                                /clone_lib="Mouse 10kb plasmid UUGCIM library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48.8%;
                                                                                                                                                                                                                        sequence stop: 723.
                                                                                                                                                                                                   tion/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                            20 S.
                                                                                                                                                                                                                                                                                                                                                                                                         2030 E.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Murinae; Mus.
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ORGANISM
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VERSION
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Best Local :
                                                                                                                                                                                                                                                                        source
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              654 GGCAGGGCTACAATATCATCAAGCACCATTTAGATTGGTGTAA 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 GGCAAAAGTATAATAATGGCAAACTCTACGCCTTTTATTTTAA 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 AGCTTGGTGCCATCTATTTTGGACTATGCCTTGCATACAGCTTTATGGGAACATTTGTCA 61
                                                                                                                                                                                                                                                                                                                                                                           Clemson University Genomics Institute Clemson University
100 Jordan Hall, Clemson, SC 29634, USA Tel: 864 656 7288
Fax: 864 656 4293
Email: rwing@clemson.edu
Seq primer: GGAAACAGCTAYGACCATG
Class: BAC ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wing.R.A. and Dean.R.A.

A BAC End Sequencing Framework to Sequence the Rice Genome Unpublished (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Majonoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzaae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OSJNBb0086H01r CUGI Rice BAC Library (EcoRI) Oryza sativa genomic clone OSJNBb0086H01r, DNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Wing RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AZ128097.1 GI:8204877
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 931)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   163 a
                                                                                                                                                                                                                                                                                                                          quality sequence start: 19 quality sequence stop: 615.
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(http://www.jax.org/resources/documents/dnares/). The DNA
(http://www.jax.org/resources/documents/dnares/). The DNA
was hydrodynamically sheared by repeated passage through a
0.005 inch orifice at constant velocity. The sheared DNA
was blunt end repaired with T4 DNA polymerase and T4
polynucleotide kinase. Adaptor oligonucleotides were
ligated to the blunt ends in high molar excess. The
adaptored DNA was purified and size-selected for a 9.5 to
10.5 kb range using preparative agarose gel
electrophoresis. Vector DNA was prepared from a derivative
of pWD42 (gi14732114 |gb|AF129072.1), a copy-number
inducible derivative of plasmid R1. The vector was ligated
with adaptors complementary to the insert adaptors and
purified. The sheared, adaptored mouse DNA was annealed to
adaptored vector DNA, and transformed into
chemically competent E. coll XL10-Gold (Stratagene) cells
and selected for ampicillin resistance."
/note="Vector: pBACIndigo; Site_1: EcoRI; Site_2: EcoRI;
Rice is the most important food crop in the world. Half of
                                                 /clone_lib="CUGI Rice BAC Library (ECORI)"
/tissue_type="Leaf"
/lab_host="E. coli DH10B"
                                                                                                                                       /clone~"OSJNBb0086H01r"
                                                                                                                                                             /cultivar="Nipponbare"
/db_xref="taxon:4530"
                                                                                                                                                                                                                    /strain="Japonica"
                                                                                                                                                                                                                                             /organism="Oryza sativa"
                                                                                                                                                                                                                                                                                           Location/Qualifiers
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63.1%;
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Pred. No. 0.055;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               554 AATCGCTTTCACCATTACTCTTAATTTACATTACCGTGGTGTGATTTGGTACCGAGG 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  494 TTTCTTTTTCTATACTTGTTCTAGAGATTCTAGAGAAAATGAGACATAGTGAAGCCAGAG 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16 TATTTTGGACTATGCCTTGCATACAGCTTTATGGGAACATTTGTCAGGCAAAAGTATAAT 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76 AATGCCAAACTCTACGCCTTTTATTTTAAATTAGATTGGTGTGATTTGATGCTGACG 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                       riate: LIAMI1155 row: n column: 18
High quality sequence start: 27
High quality sequence stop: 295.
Location/Qualifiers
1 666
                                                                                                                                                                                                                                                                                                                                                                                                          CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by:Incyte Genomics, Inc.
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cgapbs r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 606)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BI526538 606 bp mRNA linear EST 29-AUG-2001 602924971F1 NCI_CGAP_Lu33 Mus musculus cDNA clone IMAGE:5057489 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BI526538.1 GI:15351330
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Monocotyledonous rice is a diploid plant (2n-24) with a haploid genome equivalent of 431 Mbp (Arumuganathan and Earle, 1931). The relatively small genome of rice, three times larger than that of Arabidopsis, makes it suitable for genomic studies. In order to facilitate positional cloning, physical mapping and genome sequencing of rice, we have constructed a BAC library from Oryas sativa, Nipponbare variety using EcoRI as the cloning enzyme. The library contains 55,296 clones with an average insert size of 121 Kb providing approximaticy 15 haploid genome equivalents. The deep coverage allows the isolation a particular sequence with a probability of 99.9 %. Three high density filters, each containing 18,432 clones (doubly spotted), represent the whole library for colony screening and can be requested from the Clemson University BAC/EST Resource Center (www.genome.clemson.edu)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence.
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/db_xref="taxon:10090"
/clone="!MAGE:5057489"
/clone_lib="NCI_CGAP_Lu33"
/tlssue_type="pooled lung tumors"
/lab_host="DH10B (phage-resistant)"
                                                                                                                                                                               /organism="Mus musculus"
/strain="CZECH II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.4%; Score 37; DB 12; Length 931; 57.3%; Pred. No. 2.6; ative 0; Mismatches 50; Indels
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RESULT 4 BI526538

SOURCE KEYWORDS

FEATURES

Query Match Best Local Similarity

7.2%;

Score 35.8; D Pred. No. 5.4;

DB 9; Length 669;

COMMENT

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Matches

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        415 GGCCGTGAAAGCCAGCCAACTGCTGCCCAAAATCACCCAGCCGATTGGGGGGTTTCCCATC 474
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AIG49581 669 bp mRNA linear EST 30-APR-1999 603006F12.x1 603 - stressed root cDNA library from Wang/Bohnert lab Zea mays cDNA, mRNA sequence.

AIG49581 AIG49581
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACC clade; Panicoideae; Andropogoneae; Zea.
                                                                                                                                                                                                                                                                                                             Department of Biological Sciences
Stanford University
                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 669)
Walbot, V.
Maize ESTs from various cDNA libraries sequenced at Stanford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zea mays
                                                                                                                                                                                                                               Email: walbot@stanford.edu
Plate: 603006 row: F col
                                                                                                                                                                                                                                                                                                 855 California Ave, Palo Alto, CA 94304, USA
                                                                                                                                                                                                                                                                                                                                                      Contact: Walbot V
                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AI649581.1 GI:4730415
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Similarity 54.0%;
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650 725 8221
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/lab_host="E. coli XL Gold"
/note="Organ: root; Vector: pBluescriptII SK(+) XR;
Seedling stressed root cDNA library from Wang/Bohnert lab"
a 225 c 179 g 125 t
                                                                               /c.one_iib="603 - stressed root cDNA library from Wang/Bohnert lab"
/tissue_type="seedling"
/dem_ctarr="-"-"-"
                                                                                                                                                          /organism="Zea mays"
/cultivar="B73"
                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                        /db_xref="taxon:4577"
/clone_lib="603 - str
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
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Pred. No. 2.9;
                                                                                                                                                                                                                                 column: 12.
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RESULT 6
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                  197 TGGCGCCATTATATTTAACCAATCCCGTCCATACTGTATAAGATCCTTTTTCATATTGTA 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     333 AACCACATCCTTGTGATGTGA 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  213 GACCCGAGCCAGCTGCCGAAATGGAACTACGACGGCTCCAGCACCGGGCAAGCTCCCGGA 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         268 GACAAGAAGCAGGTGCGGAAATGCATCTCCCATTGGAACAGCCCTGGGCTTACTCCAATG 327
                                                                                                                                                                                                                                 rocar
                                                                                                                                                           6 TGGTGCCATCTATTTTGGACTATGCCTTGCATACAGCTTTATGGGAACATTTGTCAGGCA 65
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: ffrench-Constant RH
Department of Biology and Biochemistry
University of Bath
South Building, Bath BAZ 7AY, UK
Tel: (44) 1225 826779
Fax: (44) 1225 826779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: bssrfcebath.ac.uk
This is one of 2,122 random reads from the M13 library. For
annotation of identified clones (BLASTX, BLASTN and mapping to
coli K12 genome) please see ffrench-Constant et al. 2000, Nucle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ffrench-Constant, R.H., Waterfield, N., Burland, V., Perna, N.T., Daborn, P.J., Bowen, D. and Blattner, F.R. Benomic sample sequence of the entomopathogenic bacterium Photorhabdus luminescens W14: potential implications for virulence Appl. Environ. Microbiol. 66 (8), 3310-3329 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Photorhabdus luminescens.
Photorhabdus luminescens
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Rfc00847 Photorhabdus luminescens strain W14 M13 library
Photorhabdus luminescens genomic clone PLG00847, DNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Class: shotgun
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:29488"
/clone="PLG00847"
                                                                                                                                                                                                                                                                                                                    /dev_stage="primary phase variant"
/note="Genomic DNA from strain W14 was size selected (1-2
kb) and then cloned into M13 Janus."
135 c 101 g 228 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /strain="W14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Photorhabdus luminescens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Photorhabdus luminescens strain Wl4 Ml3
                                                                                                                                                                                                                            7.2%;
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Pred. No. 5.4;
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                                                                                                                                                                                                                                                                                                                                         135 GGGCTGAAGCCGTTCCTCCCGCAGGCCTGCAGCTTCAGGAAGCGGTAGATGGTCTCCTTC 76
                                                                                                                                                                                                                                                                                                                                                                   338 GTGCTATGGCCAGTCCTCCCAGAGCTCTGCAGCTGCACTTGGGGGTGGACAGTCTCGTGC 397
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                                                                                                                                                                                                                                                                                               398 TTGTCCTGCGTGATAACGGCCGTGAAAGCCAGC 430
                                                                                                                                                                                                                                                      75 TTGTGCTGGTCCTGCTCCGGCGAGCACGGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
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ZF637-1-000206 Zebrafish shield stage whole embryo CDNA library
MPMGp637 Danio rerio CDNA clone MPMGp637_6E15;MPMGp637E156 5°, mRNA
Homo sapiens
                                                                                                            BE774740 339 bp mRNA linear EST 20-SEP-200 MR4-UM0021-300600-008-e09 UM0021 Homo sapiens cDNA, mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: hennig@molgen.mpg.de
5' EST sequencing of clones from a zebrafish shield stage library,
normalised from 55,000 starting clones by oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Hennig S
laboraty 123, dept.Lehrach
Max-Planck-Institut fuer Molekulare Genetik
Ihnestr.63-73, D-14195 Berlin, Germany
Tel: +49 30 8413 1512
Fax: +49 30 8413 1380
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                                                 EST
                                                                   BE774740.1
                                                                                             BE774740
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                       human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      iibrary MPMGp637"

/tissue_type="whole embryo"
/dev_stage="shield stage, 6 hrs post-fertilisation"
/lab_host="E.coli, XII blue MRF"
/lab_host="E.coli, XII blue MRF"
/note="Vector: pSportl; Site_1: NotI; Site_2: SalI;
oligo-d"-NotI primed, SalI adaptors, directionally cloned,
library normalised by oligonucleotide fingerprinting"
a 210 c 159 g 157 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="mPMGp637_6E15; MPMGp637E156"
/clone_lib="Zebrafish shield stage whole embryo cDNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Danio rerio"
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                                                                     GI:10228395
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Pred. No. 7.2;
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                                                                                                                                                                                                                                                                                                                                                           74 AGATCTCCACTTAGCCAAAGGGCTGCGAGAGGTGAT 109
                                                                                                                                                                                                                                                                                                                                                                                                                                      14 CATCAAATAGTGCATGAGGTGGTGACAGAACCAGTGCGGGATTCCATCACCAGTCGGGGC 73
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl-&t2=MR4-UM0021-300
600-008-e09&t3=2000-06-30&t4=1)
See primer: puc 18 forward
See primer: puc 18 forward
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Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Nagai, M.A., Carvalho, A.F., Matsukuma, A., Balia, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                             Lycopersicon esculentum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
Asteridae; euasterids I; Solanales; Solanaceae; Solanum;
                                                                                                                                                                                                                    BM411416 BM411416 Lycopersicon esculentum cDNA clone cLEC56P7 5' end, mRWA sequence.
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High quality sequence stop: 339.
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Ludwig Institute for Cancer Research
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Alcala, J., Vrebalov, J., White, R., Vision, T., Karamycheva, S.A., Tsai
                                                                                                                                                             TSE
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                                      ycopersicon
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                    (bases 1 to 685)
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/db_xref="taxon:9606"
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Pred. No. 6.3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 339;
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477 CGTTAGCAGGGGACTCATTAGGACTTGAAAGCATGGATATGATGCTCAAAATTATA 419
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97 TATTTTAAATTAGATTGGTGTGATTTGATGCTGACGGGAGTGAGAGTAATGGCCTTATCC 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37 TACAGCTTTATGGGAACATTTGTCAGGCAAAAGTATAATAATGGCAAACTCTACGCCTTT 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ,J., Bougri,O., Kirkness,E., Utterback,T., Van Aken,S., Ronning,C.M., Fraser,C.M., Martin,G.B., Tanksley,S.D. and Glovannoni,J. Generation of ESTs from tomato fruit tissue, breaker stage (2002)
                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 781)
1 (bases 1 to 781)
1 (bases 1, Koses, Mamoud, M., Meenen, E., Pedersen, T., Reilly Islam, H., Longacre, S., Mahmoud, M., Meenen, E., Pedersen, T., Reilly M., Rose, M., Rose, R., Stokes, R., Tingey, A., von Niederhausern, A. and Wright, D., Weiss, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AZ939272 781 bp DNA linear GSS 26-APR-200
2M0198J12F Mouse 10kb plasmid UUGC2M library Mus musculus genomic
clone UUGC2M0198J12 F, DNA sequence.
plasmid inserts
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clemson University
100 Jordan Hall, Clemson, SC 29634, USA
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                                                                        Mouse whole genome scaffolding with paired end reads from 10kb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AZ939272.1 GI:13799778
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/tissue_type="Pericarp"
/dev_stage="breaker"
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/clone="cLEG56P7"
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/cultivar="TA496"
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                                                                                                                                                                                                       BM412789 790 bp
EST587116 tomato breaker fruit I
CLEG61K23 5' end, mRNA sequence.
   Lycopersicon esculentum

Lycopersicon viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
                                                                                                                                                                                          BM412789
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Class: plasmid ends
High quality sequence stop: 781.
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University of Utah Genome Center
University of Utah
Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
                                                                                                   רטזוומנט
                                                                                                                                                              BM412789.1
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Insert Length: 10000 Std Erro
Plate: 0198 row: J column: 1:
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//lab_host="E. coli strain XLI0-Gold, T1-resistance,"
//lab_host="E. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    801 585 5606
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/strain="C57BL/6J"
/db_xref="taxon:10090"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     157 TGCTGCAGGCTGTGCTGAGGATGGCCTGGTCTGCCACCCTCC-TCGAGTAGCATTTTTGCA 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                597 TATCATAAAATGCATTGGTACATTTCTGTGTTCACTACATTTCTTGTGACCGTCTTACAC 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     657 TACACTTTGTAGCAATGACATCCCAGCCAAAAGAACGATGATAAGCCATTTTATCAGCTT 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            37 TACAGCTTTATGGGAACATTTGTCAGGCAAAAGTATAATAATGGCAAACTCTACGCCTTT 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTTTAAATTAGATTGGTGTGATTTGATGCTGACGGGAGTGAGAGTAATGGCCTTATCC 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118;
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Lycopersion.
Lycopersion.
1 (bases 1 to 790)
1 (bases 1 to 790)
1, Vrebalov, J., White, R., Vision, T., Karamycheva, S.A., Tsa Alcala, J., Vrebalov, J., White, R., Vision, T., Karamycheva, S.A., Tsa Alcala, J., Trabalov, J., Romning, J., Bougri, O., Kirkness, E., Utterback, T., Van Aken, S., Ronning, C.M., Fraser, C.M., Martin, G.B., Tanksley, S.D. and Giovannoni, J. Generation of ESTs from tomato fruit tissue, breaker stage (2002)
Unpublished (2002)
                                                                                                                                                                                                                                                                                              AL034894 J/O DP MINN. RNIA Mus musculus clone 528_9H17 5', mRNA sequence.
                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleo Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murina 1 (bases 1 to 376)
Harrison, S.M., Dunwoodie, S.L., Arkell, R.M., Lehrach, H. and Beddington, R.S.
                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clemson University Genomics Institute
Clemson University
100 Jordan Hall, Clemson, SC 29634, USA
Isolation of novel tissue-specific genes from cDNA libraries
                                                                                                                                                                                                                                                                                AL034894.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seq primer: T3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: http://www.genome.clemson.edu/orders/index.html
This clone is available through the Clemson University Genomics
                                                                                                                                                                                                              house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.0%;
Similarity 49.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Asteridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-"Vector: pBluescriptSKmCUadapt; Site_1: EcoR1; Site_2: XhOI; supplier: Boyce Thompson Institute; sequencing: The Institute for Genomic Research. Fruit were harvested at the breaker stage (first sign of 1ycopene accumulation on the blossom end of fruit). Fruit were cut in half and the seeds and locules were discarded prior to freezing the pericarp."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="Pericarp"
/dev_stage="breaker"
/lab_host="SOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="tomato breaker fruit"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:4081"
/clone="cLEG61K23"
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/cultivar="TA496"
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                                                                                                                                                                                                                                                                                GI:6646520
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 35; DB 10; Length 790; Pred. No. 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                        Sciurognathi; Muridae; Murinae;
                                                                                                                                                    Craniata; Vertebrata; Euteleostomi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               113 TGCTGCTGCTCTTGGGCGCGGCGGCCGGGCCCCGGGGTGCGCCGAGGTGCTGTTCC 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         233 GCGCCGAGC 241
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                425 GCCAGCCAACTGCTGCCCAAAATCACCCAGCCGATTGGGGGGTTTCCCCATCGGCGCACCCT 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          365 TGCAGCTGCACTTGGGGGTGGACAGTCTCGTGCTTGTCCTGCGTGATAACGGCCGTGAAA 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cloned unidirectionally.
Dissected endoderm 7.5 days.
Average insert size: 1.2 kb (range: 0.2 - 2.kb).
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AL023086 389 bp mRNA linear EST 29 t8219b39 Beddington mouse dissected endoderm Mus musculus clone 528-4C13 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: pavner@pasteur.fr
clone available from Ressourcenzentrum, Heubnerweg 6, D-14059
Berlin, Germany. Web site http://www.rzpd.de
Seq primer: CCGGTCCGGAATTCCCCGGGT;
                                                                                                                                                                                                              Harrison, S.M., Dunwoodle, S.L., Arkell, R.M., Lehrach, H. and Beddington, R.S.
                                                                                                                                                                                                                                                                                                                                     Mus musculus
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Vector: pSportl; site_1: NotI; site_2: SalI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EEC Mouse Transcript Mapping Consortium Genoscope - CNS
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                       EEC Mouse Transcript Mapping Consortium Genoscope - CNS
                                                                       Contact: Wiles, M., Lehrach, H.
                                                                                                                    Development 121 (8), 2479-2489 (1995)
                                                                                                                                                                 Isolation of novel tissue-specific genes from cDNA libraries representing the individual tissue constituents of the gastrulating
                                                                                                                                                                                                                                                                                                             Eukaryota;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouse embryo
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                                                                                                                                                                                                                                                                                                                                                                nouse mouse
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rue Gaston Cremieux, 91000 Evry, France
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
/strain="C57B16 x DBA"
/db_xref="taxon:10090"
/clone="528_9H17"
/clone=11b="Beddington mouse dissected endoderm"
/tissue_type="dissected endoderm"
/tissue_type="dissected endoderm"
                                                                                                                                                                                                                                                                                   ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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Pred. No. 10;
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                                                                       and Avner, P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCAGCCAACTGCTGCCCAAAATCACCCAGCCGATTGGGGGGTTTCCCCATCGGCGCACCCT 484
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                                                                                                                                                                                                                                                                                                                                                 97044477
CDNA Library Preparation: M.B. Soares Lab Clone distribution: Researchers may obtain BNAP CDNA clones from RESEARCH GENEFICS. It should be noted that Bento Soares is generating a small number of additional specialized non-redundant arrays of BNAP cDNAs whose availability will be considered under appropriate and limited collaborative arrangements The following repetitive elements were found in this cDNA sequence: 101-139, >(CAG)n#Simple_repeat 143-177
                                                                                                                                                                                                                                                                    Contact: Chin, H
National Institute of Mental Health
6001 Executive Blvd. Room 7N-7190, MSC 9643, Bethesda,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone available from Ressourcenzentrum, Heubnerweg 6, D-14059
Berlin, Germany. Web site http://www.rzpd.de
Seq primer: CCGGTCCGGAATTCCCCGGGT;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Mammalia; Eutheria; 1 (bases 1 to 391) Bonaldo, M.F., Lennor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UI-M-AP1-agk-h-04-0-UI.rl NIH_BMAP_MST_N Mus musculus cDNA clone UI-M-AP1-agk-h-04-0-UI 5', mRNA sequence.
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Dissected endoderm 7.5 days.
Average insert size: 1.2 kb (range: 0.2 - 2.kb).
                                                                                                                                                                                               Tel: 301 443 1706 Fax: 301 443 9890
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                                                                                                                                                                                                                                                                                                                                                                                               discovery
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   house mouse.
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                                                                                                                                                                         mEST@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                      Res. 6 (9), 791-806 (1996)
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154 c 132 g 65 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /strain="c57B16 x DBA"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Metazoa;
                                                                                                                                                                                                                                                   USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Lennon, G. and Soares, M. B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 34.6;
Pred. No. 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA
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RESULT 15
AI227158
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190 GCTGCCCACCCTGCACGCCCGAGCGTCTGGCCGCTTGCGGGCCCCCCACCCGACGCGCCCT 249
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                                                                                                                                                                                          Unpublished (1996)
Contact: Marra M/Mouse EST Project
WashU-HMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                       Email: mouseest@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                  Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Rodentia; Sciurognathi; Muridae; Murinae; Mus. Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 399)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AIZZ/158 399 bp mRNA linear EST 29-
uj03a09.y1 Sugano mouse liver mlia Mus musculus cDNA clone
IMAGE:1890808 5' similar to gb:X81580 M.musculus mRNA for
insulin-like growth factor binding (MOUSE);, mRNA sequence.
AIZZ7158
                                                                                                                                                     Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                 The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , >GC_rich#Low_complexity
Seq primer: M13 Reverse.
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                      primer: custom primer used
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/note-"Vector: pT7T3D-Pac (Pharmacia) with a modified
polylinker: Site_1: Not I; Site_2: Eco RI; The
NIH_BMAP_MST_N library is a normalized library constructed
from mouse striatum. The tag is a string of 5 nucleotides
present between the Not I site and the oligo-dT track.
The library was constructed as described by Bonaldo,
Lennon and Soares, Genome Research 6: 791-806, 1996.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tissue provided by Ms. Annie Novakovich, Zivic-Miller Laboratories."
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54.3%;
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Pred. No. 10;
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Job time: 701.733 secs
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                      Search completed: October 10, 2002, 20:28:09
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                                                                                                                                                                                                                          425 GCCAGCCAACTGCTGCCCAAAATCACCCAGCCGATTGGGGGGTTTCCCATCGGCGCACCCT 484
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                                                                                                226 GCGCCGAGC 234
                                                                                                                                               485 GCCCGGAGC 493
                                                                                                                                                                                            166 GCTGCCCACCCTGCACGCCCGAGCGTCTGGCCGCCTTGCGGGGCCCCCACCCGACGCGCCCT 225
                                                                                                                                                                                                                                                                                               106 TGCTGCTGCTCTTGGGCGCGGGCGGCCGCGGGCGCCCGGGGTGCGCGAGGTGCTTCC 165
                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               was primed with an oligo(dT) primer
[ATGTGGCCTTTTTTTTTTTTTTT]; double-stranded cDNA was
ligated to a DraIII adaptor [TGTTGGCCTACTGG], digested
and cloned into distinct DraIII sites of the pME18S-FL3
vector (5' site CACTGTGTG, 3' site CACCATGTG). KhoI should
be used to isolate the cDNA insert. Size selection was
performed to exclude fragments <1.5kb Library
constructed by Dr. Sumio Sugano (University of Tokyo
Institute of Medical Science). Custom primer GCACCTGCAGCTCGAGCTCGAGCACA."

40 a 156 c 132 g 67 t 4 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
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/clone_lib="Sugano mons
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Organ: liver; Vector: pME18S-FL3; Site_1: DraIII
(CACTGTGTG); Site_2: DraIII (CACCATGTG); 1st strand cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /---"Sugano mouse liver mlia"
/sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /strain="C57BL"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                   54.38;
                                                                                                                                                                                                                                                                                                                                                                                             Score 34.6; DB 9;
Pred. No. 10;
0; Mismatches 59;
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Run
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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(LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CANCER RES. (CORR ) CORNELL RES FOUND INC.
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                                                                                              21-JAN-2000; 2000US-0489101.
                                                                                                                                         19-JAN-2001; 2001WO-US02015.
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                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
1167..1997
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119 222 222 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25	222222
ARK9U259 AREI19424 ABC19424 ARC98235 AAC76735 AAC75260 AAC75260 AAT99212 AAT99211 AAT90941 AAT90945 AAK78814 AAV39887 ABL02856 ARK78819 ABL02856 ABL02857 ABL02856 ABL02857 ABL02856 AAK786191 AAL36491	AAL37122 AAS26795 AAC79977 AAS39887 AAS39888 AAK90258
Human digestive sy brosphila melanog Human colon cancer Human colon cancer Human colon cancer Human colon cancer Human colon cancer Human colon fragme 5.6 kb Ell Pseudom Pseudomonas fluore Ell genomic DNA fr 5.6 kb ECORI-Hind Human immune/haema Pseudomonas fluore p. fluorescens 11k Drosophila melanog Drosophila melanog Drosophila melanog Drosophila melanog Drosophila melanog Drosophila melanog Drosophila melanog Prosphila melanog Drosophila melanog Drosophila melanog Drosophila melanog Drosophila melanog Coloskele Human musculoskele Human musculoskele Human musculoskele Human musculoskele Human musculoskele Human bone marrow C glutamicum/chaema C glutamicum/chaema C glutamicum codin Human biallelic po Human biallelic po Human biallelic po Human biallelic po Human biallelic po	musculoske genomic DN secreted pic sequence ic sequence digestive

## ALIGNMENTS

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Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; synovial sarcoma; cytostatic; SOXZ1; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                AAD11119 standard; DNA; 8372 BP
                                                                                                                                                                             Human small cell lung cancer associated gene, SOX21.
                                                                                                                                                                                                                                                                   24-SEP-2001 (first entry)
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AAD20201/c
                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hcAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group I molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a small cell lung cancer associated gene designated as NY-SCIC-10, encoding human SOX21 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by isolated nucleic acid comprising an NA Group 3 or 4 molecule.
                    AAD20201 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 57; Page 100-105; 152pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; AAE05814.
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                                                                                                                             481
                                                                                                                                           481 CCCTGCCCGGAGCCAAGAAG 500
                                                                                                                                                                                                            421
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAAGCCAGCCAACTGCTGCCCAAAATCACCCAGCCGATTGGGGGTTTCCCATCGGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGGTCTGCCACCCTCCTCGAGTAGCATTTTGCATGTGTAACAGGGTCTCCCCTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGGTCTGCCACCCTCCTCGAGTAGCATTTTGCATGTGTAACAGGGTCTCCCCCTCTGGG
                                                                                                                                                                                                                                                    GAAAGCCAGCCAACTGCTGCCCAAAATCACCCAGCCGATTGGGGGTTTCCCATCGGCGCA 480
                                                                                                                                                                                                                                                                                           GCTCTGCAGCTGCACTTGGGGGTTGGACAGTCTCGTGCTTGTTCCTGCGTGATAACGGCCGT
                                                                                                                                                                                                                                                                                                                                     GCTCTGCAGCTTGGGGGGTGGACAGTCTCGTGCTTGTCCTGCGTGATAACGGCCGT
                                                                                                                                                                                                                                                                                                                                                                          TGGAACAGCCCTGGGCTTACTCCAATGGCTGAGAGAGGTGCTATGGCCAGTCCTCCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                      TGGAACAGCCCTGGGCTTACTCCAATGGCTGAGAGAGGTGCTATGGCCAGTCCTCCCAGA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCACAACAACAAGAGGAGGTTGCTAAGGACAAGAAGCAGGTGCGGAAATGCATCTCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGATGCTGACGGGAGTGAGAGTAATGGCCTTATCCTGCTGCAGGCTGTGCTGAGGATGG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGCAAAAGTATAATAATGGCAAACTCTACGCCTTTTATTTTAAATTAGATTGGTGTGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGCAAAAGTATAATAATGGCAAACTCTACGCCTTTTATTTTAAATTAGATTGGTGTGAT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCACAACAACAAGAGAAGTTGCTAAGGACAAGAAGCAGGTGCGGAAATGCATCTCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-457597/49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  500;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8372 BP; 1996 A; 2143 C; 2104 G; 2124 T; 5 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scanlan MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 500; DB 22; 100.0%; Pred. No. 1.1e-152;
                       2811 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jager D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01d LJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gure AO, Chen Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 8372;
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                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention relates to a method for preparing L-amino acids by fermenting coryneform bacteria, comprising fermenting the L-amino acid producing bacteria in which at least the glucose 6-phosphate dehydrogenase (zwf) gene is amplified, and concentrating and isolating the L-amino acid produced. The L-amino acids produced are used in animal nutrition, human medicine, foodstuffs industry and the pharmaceuticals industry. The present sequence is Corynebacterium glutamicum strain ASO19 glucose 6-phosphate isomerase (pgi) DNA.
AAF84712 standard; DNA; 2811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L-amino acid; fermentation; coryneform bacteria; animal nutrition; glucose 6-phosphate dehydrogenase; zwf; human medicine; foodstuff industry; glucose 6-phosphate isomerase; pgi;
                                                                                                                                                                                                                                                                      2804 GCCCCTCTAGAAGTACTCTCGAGAAGCTTTTTGAATTCTTTGGATCACCTACCATCTGC 2745
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2811 BP; 592 A; 744 C; 764 G; 711 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Preparing L-amino acids by fermenting coryneform bacteria transformed with the glucose 6-phosphate dehydrogenase gene is particularly useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Burke K, Sahm H,
Stapelton C, Moe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200170995-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Corynebacterium glutamicum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Corynebacterium glutamicum glucose 6-phosphate isomerase (pgi) DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAD20201;
                                                                                                        2684 CCCACACCAACCGAAGACTTCCACACAGGAAGAGAAACCTTCGACGGC 2637
                                                                                                                                                                                       2744 GGCATAAAACCCATGAGGATATACGTCGCAAACGAAGTAAACCCAAACATCAACCCGAGC 2685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 4; Page 49-52; 63pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                to produce L-lysine and L-threonine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-JUL-2000; 2000WO-EP06303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pharmaceutical industry; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (DEGS ) DEGUSSA AG.
(KERJ ) FORSCHUNGSZENTRUM
(UYNA-) UNIV NAT IRELAND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-MAR-2000; 2000US-0531269
                                                                                                                                                                                                                                                                                             180 GCCTGGTCTGCCACCCTCCTCGAGTAGCATTTTGCATGTGTAACAGGGTCTCCCCTCTGG 239
                                                                                                                                                                                                                                 240
                                                                                                                                             TTGGAACAGCCCTGGGCTTACTCCAATGGCTGAGAGAGGTGCTATGGC 347
                                                                                                                                                                                                                            GGCACAACAACAAGAGAAGTTGCTAAGGACAAGAAGCAGGTGCGGAAATGCATCTCCCA 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-639130/73.
DB; AAE12461.
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FORSCHUNGSZENTRUM JUELICH GMBH.
                                                                                                                                                                                                                                                                                                                                                                             Similarity
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Moeckel B, Thierbach G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers 373..2025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product= "Glucose 6~phosphate isomerase (pgi)"
                                                                                                                                                                                                                                                                                                                                                                          50.0%;
                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                          Score 33.6;
Pred. No. 3.
  ВP
                                                                                                                                                                                                                                                                                                                                                          Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                 DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dunican LK,
                                                                                                                                                                                                                                                                                                                                                          84;
                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                               Length 2811;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel nucleotide sequence from coryneform bacteria encoding glucose-6-phosphate isomerase, attenuation of which increases metabolic flux through pentose phosphate cycle in the bacteria, producing L-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Coryneform bacteria; glucose-6-phosphate isomerase; gpi; metabolic flux; pentose phosphate cycle; L-amino acid; nucleotide production; vitamin production; L-amino acid production; ss.
                                                                                                                                        2804 GGCCGCTCTAGAAGTACTCTCGAGAAGCTTTTTGAATTCTTTGGATCACCTACCATCTGC 2745
                                                                                                                                                                                                                                                                                 Sequence 2811 BP; 592 A; 744 C; 764 G; 711 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; Page 13-16; 33pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-AUG-2000; 2000EP-0118052
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EP1087015-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Corynebacterium glutamicum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleotide sequence of a bacterial glucose-6-phosphate isomerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF84712;
2684 CCCACACCAACCGAAGACTTCCACACAGGAAGAGAAACCTTCGACGGC 2637
                                                                                                                                                                                                                                                                                                                   producing nucleotides, vitamins or L-amino acids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dunican LK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYNA-) UNIV NAT IRELAND.
                                                                                                                                                                        180 GCCTGGTCTGCCACCCTCCTCGAGTAGCATTTTGCATGTGTAACAGGGTCTCCCCTCTGG 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (DEGS ) DEGUSSA-HUELS AG
                               300 TTGGAACAGCCCTGGGCTTACTCCAATGGCTGAGAGAGGTGCTATGGC 347
                                                                                                     240 GCCACAACAACAAGAGAAGTTGCTAAGGACAAGAAGCAGGTGCGGAAATGCATCTCCCA 299
                                                                                                                                                                                                                                rocar
                                                                   GGCATAAAACCCATGAGGATATACGTCGCAAACGAAGTAAACCCAAACATCAACCCGAGC 2685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2001-267593/28
)B; AAB68033.
                                                                                                                                                                                                            84;
                                                                                                                                                                                                                          6.7%;
Similarity 50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Moeckel B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mccormback A,
                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9908-0396478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product= "glucose-6-phosphate isomerase"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stapelton C,
                                                                                                                                                                                                              0;
                                                                                                                                                                                                                            Score 33.6;
Pred. No. 3.
                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                          3.3;
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                                                                                                                                                                                                                                              DB 22;
                                                                                                                                                                                                              84; Indels
                                                                                                                                                                                                                                              Length 2811;
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                                                                                                                                                                                                            Gaps
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QΥ

33 TGCATACAGCTTTATGGGAACATTTGTCAGGCAAAAGTATAATAATGGCAAACTCTACGC 92

0; Mismatches Score 33.4; Pred. No. 1.

Indels Length

0

Gaps

0

Matches Query Match

Local

Similarity

6.78;

DB 20; 106;

Conservative

Sequence 774 BP; 233 A; 119 C; 123 G; 251 T; 48 other;

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                                                          The present invention describes a library of human polynucleotides comprising the sequences given in AZZ1252 to AZZ17779. Also described is a method of detecting differentially expressed genes correlated with the cancerous state of a mammalian cell, comprising detecting at least one cdifferentially expressed gene product in a test sample from a cell cancerous. State of a mammalian cell, comprising detecting at least one cdifferentially expressed gene product in a test sample from a cell content of being cancerous, where the gene product is encoded by one cf the 5248 polynucleotide sequences given in AZZ1253 to AZZ1779. The collection of polynucleotides source of primers and probes, which can be used for a variety of purpose, e.g. detection of expression levels, can be used for polynucleotides source of primers and probes, which can cc mapping, tissue typing or profiling, forensics, genetic analysis and contection of polynuclposisms. Polypoptides encoded by the polynucleotides can be used for raising antibodies for experimental, diagnostic and content of purposes. The polynucleotides may also be used to construct carrays for diagnostics (which may be used to determine function of an cells (e.g. to identify abnormal or diseased tissue in a human, to cidentify a genetic predisposition or susceptibility to a disease such as concer). The polynucleotides of the invention are especially used in the cdiagnosis, prognosis and management of colorectal cancer, breast cancer, and lung cancer. The polynucleotides can also be used to screen for conceptible analogues and antagonists.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-APR-1998;
28-JAN-1998;
24-FEB-1998;
31-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; gene; gene expression product; diagnosis; therapy; probe; detection; mapping; tissue typing; profiling; forensic; cancer; genetic analysis; colorectal cancer; breast cancer; lung cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ15378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel human genes and their expression products which are differentially expressed in different cell types
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Crkvenjakov R, Dickson M, Drmanac R, Drmanac S
Escobedo J, Garcia PD, Garcia V, Giese K, Inn
Jones WL, Kassam A, Kennedy GC, Kita D, Labat
Lamson G, Leshkowitz D, Pot D, Randazzo F, Re
Stache-Crain B, Sudduth-Klinger J, Williams LT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-OCT-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Page 1377; 2479pp; English.
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98US-0080114.
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Kita D, Labat I;
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                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                           Sequence 1214 BP; 254 A; 363 C; 375 G; 222 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                  of the binding protein. See also AAQ04550,Q04552 and AAQ04553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; ; pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Insulin-like growth factor binding protein - comprising amino acid sequence of defined sequence, useful for blocking effects of excessive growth factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                               The fragment is derived from rat BRL-3A cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1990-158010/21.
P-PSDB; AAR04909.
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      106 GCTGCCCACCCTGCACGCCCGAGCGTCTGGCCGCCTGCGGACCCCCACCCGACGCGCCCT
                                                             425 GCCAGCCAACTGCTGCCCAAAATCACCCAGCCGATTGGGGGTTTCCCCATCGGCGCACCCT 484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      399
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                                                                                                                                                                        365 TGCAGCTGCACTTGGGGGTGGACAGTCTCGTGCTTGTCCTGCGTGATAACGGCCGTGAAA 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          213
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219 TGCCTTCAGAATTATGGCGACCTCTGCGATGGAAGAATGGGATCAGAGAAGGATACAC 278
                                                                                                                    46 TGCTGCTGTTGGGCGGGCGGTTGCGGTCCTGGGGTGCGCCGAGGTGCTGTTCC 105
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                                                                                                                                                                                                                                                                ocal Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCATGTGTAACAGGGTCTCCCCT 235
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCCTGCTGCAGGCTGTGCTGAGGATGGCCTGGTCTGCCACCCTCCTCGAGTAGCATTTT 212
                                                                                                                                                                                                                                         69;
                                                                                                                                                                                                                                         Conservative
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93..904
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                                                                                                                                                                                                                                                                6.6%; Score 33; 53.5%; Pred. No.
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                                                                                                                                                                                                                                                                                             DB 11; Length 1214;
                                                                                                                                                                                                                                      60;
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         165
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Query Match
Best Local Similarity
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27-AUG-1999;
11-JAN-2000;
02-MAY-2000;
                                                                                    Sequence 573 BP; 169 A; 124 C; 107 G; 167 T; 6 other;
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Sugiyama T, Wakamatsı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; 99JP-0248036.
; 99JP-0300253.
; 2000JP-0118776.
; 2000JP-0183767.
; 2000JP-0241899.
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   50.0%;
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      Score 32.8; DB Pred. No. 2.5;
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The present invention describes primer sets for synthesising 5602 CC full-length cDNAs defined in the specification. Where a primer set CC comprises: (a) an oligo-dT primer and an oligonucleotide complementary ct to the complementary strand of a polynucleotide which comprises one of CC the 5602 nucleotide sequences defined in the specification, where the CC oligonucleotide comprises at least 15 nucleotides; or (b) a combination CC of an oligonucleotide comprising a sequence complementary to the CC complementary strand of a polynucleotide which comprises a 5'-end sequence and an oligonucleotide comprising a sequence, where the CC polynucleotide which comprises a 3'-end sequence, where the CC polynucleotide comprises at least 15 nucleotides and the combination of CC the 5'-end sequence, and sequence is selected from those defined in CC the specification. The primer sets can be used in antisense therapy and CC in gene therapy. The primer sets can be used in antisense therapy and CC detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers are also useful for the CC detection and/or diagnosis of the abnormality of the proteins encoded by CC detection and/or diagnosis of the abnormality of the proteins encoded by CC detection and/or diagnosis of the primers are also useful for AAH13628 and AAH13633 to AAH18742 represent human cDNAs sequences; AAB92446 to AAH3633 to AAH3642 represent human cond sequences; AAB92446 to AAH3633 co fine present invention.
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h A, Nagai K,
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Length 573;

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The present invention describes primer sets for synthesising 5602 CC full-length cDNAs defined in the specification. Where a primer set CC comprises: (a) an oilgo-OF primer and an oilgonucleotide complementary to the complementary strand of a polynucleotide which comprises one of CC the 5602 nucleotide sequences defined in the specification, where the CC oilgonucleotide comprises at least 15 nucleotides; or (b) a combination CC of an oilgonucleotide comprises a sequence complementary to the CC complementary strand of a polynucleotide which comprises a 5'-end comprises a 5'-end sequence and an oilgonucleotide comprising a sequence complementary to a CC polynucleotide which comprises a 3'-end sequence, where the CC oilgonucleotide which comprises a 3'-end sequence, where the CC oilgonucleotide comprises a 3'-end sequence, where the CC oilgonucleotide comprises at least 15 nucleotides and the combination of CC the 5'-end sequence/3'-end sequence is selected from those defined in CC the specification. The primer sets can be used in antisense therapy and CC in gene therapy. The primers are useful for synthesising polynucleotides, CC detection and/or diagnosis of the abnormality of the proteins encoded by the full-length cDNAs. The primers are also useful for the full-length cDNAs. The primers allow obtaining of the full-length cDNAs. The primers allow obtaining of the AAH13628 and
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27-AUG-1999;
11-JAN-2000;
02-MAY-2000;
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; 2000JP-0118776.
; 2000JP-0183767.
; 2000JP-0241899.
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1 T, Wakamatsu A, Nagai K,
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         AAF15566 to AAF16505 encode the human prostate cancer associated proteins, called prostate cancer antigens, given in AAB56363 to AAB57302. The prostate cancer antigens can have neuroprotective, cytostatic, cardioactive, immunomodulatory, muscular, vulnerary, gastrointestinal, nephrotropic, antiinfective, gynaecological and antibacterial activities, and can be used in gene therapy. The prostate cancer antigen polynucleotides may be used for detection of prostate cancer, chromosome identification, as chromosome markers, and for numerous other diagnostic
                                                                                                                                                                                                                              Prostate cancer associated gene sequences, referred to as prostate cancer antigens, useful for treatment, prevention, and diagnosis o disorders such as prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; prostate cancer; prostate cancer antigen; detection; diagnosis; neuroprotective; cytostatic; cardioactive; immonmodulatory; muscular; vulnerary; gastrointestinal; nephrotropic; antiinfective; ygyaecological; antibacterial; gene therapy; neural; immune; reproductive; renal; gastrointestinal; pulmonary; cardiovascular; proliferative disorder; wound; infectious disease; ss.
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                                                                                                                                                                                           Claim 1; Page 1091-1092; 2338pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                              (HUMA-) HUMAN GENOME SCI INC (ROSE/) ROSEN C A.
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1 Similarity 50.0%;
82; Conservation
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Pred. No. 5;
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Qy
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Best Local
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     31-JAN-2000;
04-FEB-2000;
24-FEB-2000;
12-MAR-2000;
11-MAR-2000;
11-MAR-2000;
11-MAY-2000;
21-JUN-2000;
21-JUN-2000;
21-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; nootropic; neuroprotective; cytostatic; dermatological; virucide; immunosuppressive; antioflammatory; anti-HIV; antibacterial; vulnerary; antiparkinsonian; antisckling; antianaemic; antiarthritic; cancer; anticheumatic; hepatotropic; cerebroprotective; antiinflammatory; antiallergic; antidabetic; antiulcer; anticorvulsant; antifungal; antiparasitic; cardiant; immune disorder; cardiovascular disorder; neurological disease; infection; nephrotropic; gene therapy; vaccine; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or research purposes. The prostate cancer antigens may be used to treat disorders such as neural, immune, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal, and proliferative disorders, wounds, and infectious diseases. AAF16506 to AAF16514 to AAB57303 represent sequences used in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                           17-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                       16-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200159063-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human nervous system related polynucleotide SEQ ID NO 12743.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABA20412 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1366 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      102
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTATGGGAACATTTGTCAGGCAAAAGTATAATAATGGCAAACTCTACGCCTTTTATTT 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
     2000US-0179065
2000US-0184664
2000US-0186350
2000US-0199874
2000US-0199874
2000US-0199123
2000US-0199467
2000US-0209467
2000US-0214886
2000US-0215135
2000US-0216887
2000US-0217487
2000US-0225514
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                           2001WO-US01334.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 32.6; DI
Pred. No. 4.8;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; 327 G; 386 T; 4 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35;
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     14-AUG-2000

14-AUG-2000

14-AUG-2000

14-AUG-2000

11-AUG-2000

12-AUG-2000

22-AUG-2000

22-AUG-2000

21-AUG-2000

21-AU
 2000US -0225277

2000US -0225777

2000US -0225757

2000US -0225757

2000US -0225757

2000US -0225759

2000US -02258681

2000US -0229282

2000US -0229343

2000US -0229343

2000US -0229343

2000US -0229343

2000US -0229343

2000US -0231243

2000US -02323081

2000US -02323081

2000US -02323081

2000US -02332398

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2000US -0233636

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2000US -02358484

2000US -0235484

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2000US -0235484

2000US -0235836

2000US -0235836

2000US -0235836

2000US -0236370

2000US -0236471

2000US -0246475

2000US -0246476

2000US -0246526

2000US -0246526

2000US -0246526

2000US -0246526

2000US -0246526

2000US -0246526
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The invention relates to novel genes (ABA11004-ABA21534) and proteins (ABB14678-ABB18001) useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are medical conditions e.g. by protein or gene therapy. The genes are consisted from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (ant)agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) Lumune disorders e.g. Addison's disease, allergies, autoimmune thyroiditis, diabetes mellitus, Crohn's chiese, multiple sclerosis, rheumatoid arthritis and ulcerative colitis; (c) cardiovascular disorders such as myocardial ischaemias; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and cepilepsy; and (f) infectious diseases such as viral, bacterial, fungal cand parasitic infections, but was obtained in electronic format directly crom WIPO at ftp.wipo.int/pub/published_pct_sequences.
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
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17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
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08-NOV-2000;
08-NOV-2000;
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17 - NOV
17 - NOV
17 - NOV
17 - NOV
                                                                                                                                                                                                                                                                                                                                                                           Nucleic acids encoding 3224 human nervous system antigen polypeptides, useful for preventing, diagnosing and/or treating nervous system cancers and metastases .
                              Sequence 32248 BP; 10625 A; 6481 C; 6425 G; 8717 T; 0 other;
                                                                                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 12743; 1701pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-541565/60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rosen CA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HUMA-) HUMAN GENOME SCI INC
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-NOV-2000;
-NOV-2000;
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2000US-0249264

2000US-0249264

2000US-0249297

2000US-0249299

2000US-0249290

2000US-0251160

2000US-0251160

2000US-0251160

2000US-0251169

2000US-025198

2000US-0251866

2000US-0251866

2000US-0251868

2000US-0251868

2000US-0251869

2000US-0251869

2000US-0251869

2000US-0251869

2000US-0251989

2000US-0251989

2000US-0251989

2000US-0251999

2000US-0251999

2000US-0251999

2000US-0251999
 6.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ruben SM;
 Score 32.6;
 DB 22;
 Length 32248;
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Best Local Similarity 63.3%; Matches 50; Conservative
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04-FEB-2000;
24-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7122/c
AAL37122 standard; DNA; 32248 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                              Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinfilammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human; secreted protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                          17-JAN-2001; 2001WO-US01338.
                                                                                                                                                                                                                                                                                                                                                                              02-AUG-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                       musculoskeletal system; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human musculoskeletal system related polynucleotide SEQ ID NO 3487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         103 AAATTAGATTGGTGTGATT 121
                                                                                                                                                                                                                                                                             2000US-0179065.
2000US-0180628.
2000US-0184664.
2000US-01846350.
2000US-0189874.
2000US-0190076.
2000US-0190176.
                                                                                                                                           2000US-0220964.
2000US-0224518.
2000US-0224519.
2000US-0225213.
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2000US-0209467
2000US-0214886
2000US-0215135
2000US-0216647
2000US-0216880
                                               2000US-0226279
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Mismatches
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Дb
                                                                                 QY
                                                                                                                                                                                              Query Match
Best Local S
Matches 50
                                                                                                                                                                                                                   The invention relates to novel genes (AAL34669-AAL37666) and proteins (ABB03087-ABB04109) associated with the musculoskeletal system useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, and prevention of: (a) cancer, e.g. breast and ovarian cancer and cother cancers of the adrenal gland, bone, bone marrow, breast gastrointestinal tract, liver, lung, or urogenital; (b) immune discretes e.g. Addison's disease, allerqies autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, crohn's disease, multiple sclerosis, rheumatoid arthritis and ulcerative colitis; (c) cardiovascular disorders such as myocardial ischaemias; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy; and (f) infectious diseases such as myocardial ischaemias; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy; parasitic infections diseases such as viral, bacterial, fungal and parasitic infections, but was obtained in electronic format directly from WIPO at ftp. wipo.int/pub/published_pct_sequences.
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17-NOV-2000
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01-DEC-2000
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17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
                                                6457 TCTAAAGGCTCCTGTGTCATGAAAAAGTATGATTAGATCAATTTGTATGCCTTTTCTTCT 6398
                                                                                                                                                                                            Sequence 32248 BP; 8717 A; 6425 C; 6481 G; 10625 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isolated polypeptide for treating, preventing and/or prognosing disorders related to the musculoskeletal system including musculoskeletal cancers and also for testing and detection e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-451937/48.
103 AAATTAGATTGGTGTGATT 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 2; SEQ ID NO 3487; 781pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rosen
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                                                                                   43 TITATGGGAACATTTGTCAGGCAAAAGTATAATAATGGCAAACTCTACGCCTTTTATTTT 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CA,
                                                                                                                         50;
                                                                                                                                      6.5%;
Similarity 63.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-024921

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2000US-024921

2000US-024921

2000US-024924

2000US-024924

2000US-024924

2000US-024924

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2000US-024926

2000US-024929

2000US-0250160

2000US-0250160

2000US-0250160

2000US-0251030

2000US-0251186

2000US-025186

                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ruben SM;
                                                                                                                       0; Mismatches 29;
                                                                                                                                        Score 32.6;
Pred. No. 27;
                                                                                                                                                           DB 22;
                                                                                                                       Indels
                                                                                                                                                    Length 32248;
                                                                                                                       0;
                                                                                                                       Gaps
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01-SEP-2000
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19-SEP

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2000US-0241808 2000US-0241808 2000US-0241809 2000US-024617 2000US-024647 2000US-024647 2000US-024647 2000US-024647 2000US-024647 2000US-024647 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024652 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024661 2000US-024920 2000US-024920 2000US-024921 2000US-024921

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26-JUL-2000

14-AUG-2000

15-AUG-2000

22-AUG-2000

23-AUG-2000

23-AUG-2000

20-SEP-2000

01-SEP-2000

01-SEP-2000

01-SEP-2000

05-SEP-2000

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05-SEP-2000
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19-MAY-2000;
07-JUN-2000;
28-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cytostatic; cardiant; vasotropic; cerebroprotective; nootropic; neuroprotective; antibacterial; virucide; fundicide; opthalmalogical; vulnerary; secreted protein; rheumatoid arthritis; hyperproliferative disorder; cardiovascular disorder; cardiac arrest; cerebrovascular disorder; cerebral ischaemia; angiogenesis; nervous system disorder; cerebral ischaemia; angiogenesis; corneal infection; wound healing; epithelial cell proliferation; skin ageing; food additive; preservative; antiproliferative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAS26795 standard; DNA; 32248
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human genomic DNA encoding partial novel secreted protein, Seq ID 1769
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07-JUL-2000;
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2000US-0118664
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29-SEP-2000;
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                                                                                                                                                                                                                                                 The invention relates to isolated nucleic acid molecules and their concoded secreted proteins. The nucleic acids and proteins are used to CP prevent, treat or ameliorate a medical condition in e.g. humans, mice, crabbits, goats, horses, cats, dogs, chickens or sheep. They care also used in diagnosing a pathological condition or susceptibility comes and so the proteins can also be used in alleviating symptoms associated with the disorders and in clud autoimmune diseases e.g. radioimmunoassays or enzyme linked conclude autoimmune diseases e.g. rheumatoid arthritis, hyperproliferative disorders e.g. cardiac arrest, cerebrovascular disorders e.g. rheumatoid arthritis, can also cardiovascular disorders e.g. cardiac arrest, cerebrovascular disorders e.g. corneal infection, and many other consorted in the specification. The polypeptides can also be used to aid wound healing and epithelial cell proliferation, to preserve takin aging due to sunburn, to maintain organs before transplantation, for supporting cell culture of primary tissues, to cregenerate tissues and in chemotaxis. The polypeptides can also be used to aid wound healing and epithelial cell proliferation, to regenerate tissues and in chemotaxis. The polypertides can also be used to aid middlive or preservative to increase of primary tissues, to cregenerate tissues and in chemotaxis. The polypertides can also be used cas a food additive or preservative to increase ot are also be used cas a food additive or preservative to increase ot are also be used cas a food additive or preservative to increase ot are also be used cas a food additive or preservative to increase ot are also be used cas a food additive or preservative to increase or decrease storage capabilities, fat content, lipid, protein, carbohydrate, vitamins, and carbohydrate and protein of the preservation of the pr
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Best Local :
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25852 CAATCTGCCTTTTGTCAGT 25870
                                                                                25792 TCTAAAGGCTCCTGTGTCATGAAAAAGTATGATTAGATCAATTTGTATGCCTTTTCTTCT 25851
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New nucleic acid molecules encoding 461 human secreted proteins for diagnosing, preventing, treating or ameliorating medical conditions and used as food additives or preservatives
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-488783/53
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                                        103 AAATTAGATTGGTGTGATT 121
                                                                                                                 43 TTTATGGGAACATTTGTCAGGCAAAAGTATAATAATGGCAAACTCTACGCCTTTTATTTT 102
                                                                                                                                                                                            Similarity
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                                                                                                                                                                        Conservative
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Pred. No. 27;
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0;

Matches Query Match

60;

Conservative

0,

46;

Indels

0,

Gaps

0;

Similarity

56.5%;

Score 32.4; DE Pred. No. 6.2; 0; Mismatches

DB 21; Length 1671;

Sequence 1671 BP; 481 A; 294 C; 325 G; 571 T; 0 other;

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RESULT 12
AAC79977/c
CC antiarthritic, antirheumatic, antiproliferative, cytostatic, cardiant, covered proceeding, the condition in a condition, europrotective, antibacterial, covered provide, considering in the condition in e.g. humans, mice, rabbits, goats, compared a medical condition in e.g. humans, mice, rabbits, goats, compared pathological condition or susceptibility to a pathological condition or susceptibility to a pathological condition or susceptibility to a pathological condition or susceptibility to a pathological condition or susceptibility to a pathological condition. The antibodies to (II) can also be used in alleviating conditions associated with the disorders and in diagnostic immunoassays compared in the condition of susceptibility to a pathological condition. The antibodies to (II) can also be used in alleviating condition associated with the disorders and in diagnostic immunoassays compared to reacted include autoimmune diseases compared to reacter and reacted include autoimmune diseases compared to reacter and reacted include autoimmune diseases compared to reacted to all wound healing and epithelial cell conditions of an also be used as a food additive or preservative to increase or decrease storage compared to tissues and in chemotraxis. The polypeptides can also be conditioned to reacted to increase or decrease storage compared to the reacted and reacted to increase or decrease storage compared to the reacted and reacted and reacted to increase or decrease storage compared to the reacted and reacted and reacted and reacted and reacted and reacted and reacted and reacted and reacted and reacted and reacted and reacted and reacted a
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AAC79977 standard; cDNA; 1671 BP
                                                 capabilities.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim la; Page 357; 418pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleic acid molecules encoding human secreted proteins, preventing, treating or ameliorating a disorder, e.g. Al Parkinson's diseases and cancers -
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07-JAN-2000; 2000US-0174852
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antiproliferative; cytostatic; cardiant; vasotropic; cerebroprotective; nootropic; neuroprotective; antibacterial; virucide; fungicide; ophthalmological; vulnerary; gene therapy; treatment; autoimmune disease; hyperproliferative disorder; cardiovascular disorder; ocular disorder; hyperproliferative disorder; cardiovascular disorder; ocular disorder; cerebrovascular disorder; nervous system disorder; infection; skin aging; wound healing; epithelial cell proliferation; transplantation; ss.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Secreted protein; human; immunosuppressive; antiarthritic; antirheumatic;
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DB; AAB45054.
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14 - AUG - 2000) 14 - AUG - 2000) 14 - AUG - 2000) 14 - AUG - 2000) 14 - AUG - 2000) 16 - AUG - 2000) 18 - AUG - 2000) 22 - AUG - 2000) 22 - AUG - 2000) 23 - AUG - 2000) 30 - AUG - 2000) 01 - SEP - 2000) 01 - SEP - 2000) 01 - SEP - 2000)	PR 16-MAR-2000; 2000US-0189874.  PR 17-MAR-2000; 2000US-019076.  PR 18-APR-2000; 2000US-019076.  PR 19-MAY-2000; 2000US-020515.  PR 19-MAY-2000; 2000US-0205467.  PR 28-JUN-2000; 2000US-021486.  PR 30-JUL-2000; 2000US-0216647.  PR 07-JUL-2000; 2000US-0216647.  PR 11-JUL-2000; 2000US-0217487.  PR 11-JUL-2000; 2000US-0217496.  PR 14-JUL-2000; 2000US-02205113.  PR 14-JUL-2000; 2000US-0225214.   Human; colon cancer; congenital abnormality, infection inflammatory bowel disease; IBD; neoplastic disorder; intestinal inflammatory disorder; malabsorption syndro sigmoid disease; antibacterial; antiviral; antiinflamm cytostatic; ds.  Homo sapiens.  WO200155302-A2.  02-AUG-2001.  17-JAN-2000; 2000US-0180628.  24-FEB-2000; 2000US-0180628.  24-FEB-2000; 2000US-0180638.  24-FEB-2000; 2000US-0180638.	Qy 17 ATTTTGGACTATGCCTTGCATACAGCTTTATGGGAACATTTGTCAGGCAAAAGTATAATA 76	
08-NOV-2000; 20000 08-NOV-2000; 20000 08-NOV-2000; 20000 08-NOV-2000; 20000 08-NOV-2000; 20000 08-NOV-2000; 20000 17-NOV-2000; 20000	PR 13-OCT-2000; 2000US-023937. PR 13-OCT-2000; 2000US-023937. PR 20-OCT-2000; 2000US-0240960. PR 20-OCT-2000; 2000US-0241785. PR 20-OCT-2000; 2000US-0241786. PR 20-OCT-2000; 2000US-0241787. PR 20-OCT-2000; 2000US-0241808. PR 20-OCT-2000; 2000US-0241809. PR 20-OCT-2000; 2000US-0241826. PR 08-NOV-2000; 2000US-0246474. PR 08-NOV-2000; 2000US-0246475. PR 08-NOV-2000; 2000US-0246477. PR 08-NOV-2000; 2000US-0246477. PR 08-NOV-2000; 2000US-0246477. PR 08-NOV-2000; 2000US-0246477. PR 08-NOV-2000; 2000US-0246523. PR 08-NOV-2000; 2000US-0246524. PR 08-NOV-2000; 2000US-0246525. PR 08-NOV-2000; 2000US-0246525. PR 08-NOV-2000; 2000US-0246526.	14-SEP-2000, 2000U 14-SEP-2000, 2000U 21-SEP-2000, 2000U 21-SEP-2000, 2000U 25-SEP-2000, 2000U 25-SEP-2000, 2000U 27-SEP-2000, 2000U 27-SEP-2000, 2000U 27-SEP-2000, 2000U 29-SEP-2000, 2000U	05-SEP-2000; 20000; 05-SEP-2000; 20000; 06-SEP-2000; 20000; 06-SEP-2000; 20000; 06-SEP-2000; 20000; 08-SEP-2000; 20000; 09-SEP-2000; 09-SEP-

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Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at fift, whipo.int/pub/published_pot_sequences.
                                                                                                                                                                                                                                                                                                                                          Matches
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Best Local :
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117-NOV-2000
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17-NOV-2000;
17-NOV-2000;
       AAS39888;
                                                AAS39888 standard; DNA; 5003 BP
                                                                                                                                                            4856 TTGGGAGCTTTATTGAAATTGTATTAAATT 4827
                                                                                                                                                                                                                                             Sequence 5003 BP; 1809 A; 870 C; 1047 G; 1277 T; 0 other;
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2000US-0251030.
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2000US-0249217
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60.0%; Pred. No. 11;
ative 0; Mismatches
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2000US-0217487

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2000US-0225276

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29-SEP-2000;
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                                                                                                                   Human; digestive system antigen; gene therapy; cancer; appendicitis; ulcerative colitis; infection; Hirschsprung's disease; chronic colitis; digestive system disorder; Meckel's diverticulum; ds.
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                                                                                                                                                                                                      Human digestive system antigen genomic sequence SEQ ID NO: 3834.
                                                                                                                                                                                                                                                 05-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                             AAK90258;
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Similarity 60.0%;
54; Conservative
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0; Mismatches

36;

Indels

0;

Gaps

0

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The present invention relates to the isolation of novel human colon cc associated polypeptides (AAU22768-AAU22701), and the cDNA and genomic cc sequences encoding for them. The sequences of the invention are useful in the diagnosis, treatment, prevention and/or prognosis of disorders (cc of the colon including colon cancer, congenital abnormalities (e.g. atresia and stenosis), bacterial and viral infections.

CC (e.g. atresia and stenosis), bacterial and viral infections.

CC (e.g. polyps and adenomas, intestinal inflammatory disorders, colitis, (cc lonic inflammation, diarrhoea and dysentery, malabsorption syndromes.

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                                                                                                                                                                                                               Sequence 5003 BP; 1810 A; 870 C; 1046 G; 1277 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID No 785; 562pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated polypeptide for treating, preventing and/or prognosing disorders related to the colon including colon cancers and also for testing and detection e.g. diagnosis - 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2000US-0251989.
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Score 32.4;
Pred. No. 11;
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                                                                          GENOME
                                                                          SCI
                                             Ruben SM;
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The present invention provides the protein and coding sequences of a number of human digestive system antigens. These can be used in the diagnosis, treatment and prevention of digestive system disorders, including cancer, Meckel's diverticulum, bacterial or parasitic infections, appendicitis, Hirschsprung's disease, chronic colitis or ulcerative colitis. The present sequence is a genomic DNA fragment encoding a digestive system antigen of the invention. Disclosure; SEQ ID NO 3834; 986pp; English. Polynucleotides encoding digestive system antigens, useful for diagnosing, treating, preventing and/or prognozing disorders of the digestive system, particularly cancer and cancer metastases -Sequence 5003 BP; 1809 A; 870 C; 1047 G; 1277 T; 0 other;

Query Match 6.5%; Score 32.4; DB 22; Length 5003; Best Local Similarity 60.0%; Pred. No. 11; Matches 54; Conservative 0; Mismatches 36; Indels 0; 0; Gaps

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Дb δÔ 18 TTTTGGACTATGCCTTGCATACAGCTTTATGGGAACATTTGTCAGGCAAAAGTATAATAA 77

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Search completed: October 10, 2002, 15:17:13 Job time : 141 secs

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Post-processing: Minimum Match 0%
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5 US-08-379-580-3
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1 US-08-379-580-3
1 US-08-379-580-3
1 US-08-276-852-156
1 US-08-899-575-170
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2 US-08-899-575-170
3 US-08-899-575-170
4 US-09-103-840A-2
4 US-09-103-840A-2
5 PCT-US95-08743-170
6 US-08-898-575-170
9 US-08-898-575-170
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2 US-09-103-840A-2
4 US-09-103-840A-2
5 US-08-808-931-19
5 US-08-808-931-19
5 US-09-050-630A-19
5 US-09-050-630A-19
5 US-09-050-630A-19
5 US-09-103-420B-19
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                sequence 3, Appli
Sequence 156, Appli
Sequence 156, App
Sequence 156, App
Sequence 156, App
Sequence 170, App
Sequence 170, App
Sequence 170, App
Sequence 170, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 19, Appli
Sequence 11, Appli
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Sequence 20, Appl
Sequence 20, Appl
Sequence 19, Appl
Sequence 19, Appl
Sequence 1, Appli
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28 28.4 5.7 7218 1 US-OB-232-463-14

C 29 28.2 5.6 1379 2 US-OB 437-607A-1

Sequence 14, Appli
28 28.4 5.7 7218 1 US-OB-232-463-14

Sequence 1, Appli
31 28 2 5.6 4403765 4 US-OB 493-852A-2

Sequence 2, Appli
32 28.2 5.6 4403765 4 US-O9-103-840A-2

Sequence 2, Appli
33 28 5.6 423 1 US-OB-470-179-109

C 34 28 5.6 1537 6 5504194-1

C 37 27.6 5.5 1060 2 US-OB-458-568A-11

C 38 27.6 5.5 1656 3 US-OB-655-241-17

C 40 27.6 5.5 1656 3 US-OB-655-227-17

C 41 27.6 5.5 1656 3 US-OB-655-241-17

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C 44 27.6 5.5 2295 3 US-OB-655-241-17

C 44 27.6 5.5 2295 3 US-OB-144-759-17

C 44 27.6 5.5 2295 3 US-OB-144-759-17

C 45 27.6 5.5 2295 3 US-OB-144-759-17

C 46 27.6 5.5 2295 3 US-OB-144-759-19

Sequence 17, Appli

C 48 27.6 5.5 2295 3 US-OB-144-759-17

Sequence 17, Appli

C 48 27.6 5.5 2295 3 US-OB-144-759-17

Sequence 17, Appli

C 48 27.6 5.5 2295 3 US-OB-144-759-19

Sequence 2, Appli

C 49 27.6 5.5 2295 3 US-OB-655-241-17

Sequence 17, Appli

C 40 27.6 5.5 2295 3 US-OB-144-759-19

Sequence 17, Appli

C 41 27.6 5.5 2295 3 US-OB-144-759-19

Sequence 21, Appli

C 42 27.6 5.5 2295 3 US-OB-144-759-19

Sequence 17, Appli

C 43 27.6 5.5 2295 3 US-OB-144-759-19

Sequence 17, Appli

Sequence 17, Ap
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BECKERT, MICHEL
BRADS, PRACAL
BRADT, JEAN-TRANCOLS
BRITTLE OF INVENTION. DAA SEQUENCES CODING FOR CINNAMOYL-COA
TITLE OF INVENTION. DAA SEQUENCES CODING FOR CINNAMOYL-COA
REDUCTASE, AND APPLICATIONS THEREOF IN THE CONTROL OF
LIGHIN CONTENTS IN PLANTS

NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
COUNTRY LOA
COUNTRY: USA
COUNTRY: NAILOGTON
STATE: VA-Z01
COMPUTER READABLE PORM:
MEDIUM TYPE: Floppy disk
COMPUTER READABLE PORM:
COMPUTER READABLE PORM:
MEDIUM TYPE: Floppy disk
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MEDIUM TYPE: Floppy disk
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MEDIUM TYPE: FLOPPY disk
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MEDIUM TYPE: FLOPPY disk
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; NAME/KEY: CDS
; LOCATION: 195..1310
; SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-043-937A-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 2
; Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                            TELEPHONE: 201-847-7166
TELEPHONE: 201-848-7166
TELEFAX: 201-848-9228
INFORMATION FOR SEQ ID NO: 20:
SEQUENCE CHARACTEREISTICS:
ENGRY: 311 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOSTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA;
APPLICATION NUMBER: US/08/937,58
                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Harris, James M.
APPLICANT: You, Olimin
TITLE OF INVENTION: Identification of a DNA Region
TITLE OF INVENTION: Potentially Useful for the Detection of Mycobacterium
TITLE OF INVENTION: Kansasii
NUMBER OF ESQUENCES: 20
CORRESPONDENCE ADDRESS:
ORIGINAL SOURCE:
                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       718 AMACCAGGMACTGGTACTGCT 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    478 GCGCCGTGCAGGGCTGCCAGGGCGTCTTCCACACCGCCTCCCCCGTCACCGACGACCCGG 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              478 AGCCCGCGGGTTCCTGCTGAT 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       658 AGCGCGGGCCCGACGTCGTGGTCGACGAGTCGTGCTGGAGCCTCCGAGTTCTGCGAGA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418 AGCTAGAGCCCAGGCAGACTGTGAATGCGACCTGTTCGAGAACTCATCAGGTGCGAGA 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     598 CCGGCACGGTGCGGCGGGTGTTCACGTCGTCCATCGGCGCCGTGACCATGGACCCCA 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            358 GTTGCGAGGGGCGACCAAGCCCCAACCCCGGGGAATCCGAGCAGGTATATAAGGGGCCC 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        538 AGCAAATGGTGGAGCCGGCGGTGCGCGGCGCGCGGCGGAGG 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             298 GGCTCGGTAATGATTGGCCAGGGCGCATCACTGCGAACCTGTCAATCACGGGTCCTCCGG 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                      TOPOLOGY:
                                                        STRANDEDNESS:
                                                                                                                                                                                                                             NAME: Fugit, Donna R.
REGISTRATION NUMBER: 32,135
REFERENCE/DOCKET NUMBER: P-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 07417-6800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Becton Dickinson and Company
STREET: 1 Becton Drive
CITY: Franklin Lakes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Joca I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J, Application US/08937580
6013510
                                                                             nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New Jersey
                                    linear
              DNA (genomic)
                                                                                                                                                                                                                                                                                                                25-SEP-1997
N: 435
                                                          double
                                                                                                                                                                                                                                                                                                                                                                                              Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                     us/08/937,580
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RESULT 3
US-09-336-039-20/c
US-09-336-039-20/c
Sequence 20, Application US/09336039
Patent No. 6291176
Patent INFORMATION:
GENERAL INFORMATION:
APPLICANT: Harris, James M.
You, Qimin
δõ
                                                                                                                                             ORGANISM: Mycobacterium gastri; SEQUENCE DESCRIPTION: SEQ ID NO: 20: US-09-336-039-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
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                                                                                                                                                                                                                                                                                                                          APPLICATION UNMER: 08/937,580
APPLICATION UNMER: 08/937,580
FILING DATE: 25-SEP-1997
ATTORNEY/AGENT INFORMATION:
NAME: FUGIL Donna R.
REGISTRATION UNMER: 9-3690/5510-13
REFERENCE/DOCKET NUMBER: 32,135
REFERENCE/DOCKET NUMBER: 9-3690/5510-13
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-847-7166
TELEPHONE: 201-847-7166
INFORMATION FOR SEQ ID NO: 20:
SEQUENCE CHARACTERISTICS:
LENGTH: 311 base pairs
TUTEL: NOTAL: 311 base pairs
                                             Matches 67; Conserv
                                                                   Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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203 CCTAAGTAACTCTTACCACGTCACTAGGCCAAAGAGGGGCGTGGGGTGAACGAAAGGGCT 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               148 CCGTAGGCATTTCGACCGCGGGATGGCGATCAGGAGCAGCCTGGGACCAGCCGACGCGTT 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               203 CCTAAGTAACTCTTACCACGTCACTAGGCCAAAGAGGGGCGTGGGGGTGAACGAAAGGGCT 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       323 CATCAC 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 263 CCCGAACTTTTTTTTTTCCAGCCAGGCCGAACGGGGCTCGGTAATGATTGGCCAGGGCG 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28 CATCGC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88 ACCCGAGTTCGTCGCCGCCACCGACGCCGACCCGTCGATGGCTGACGCATGGCTGGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 6.3%;
Local Similarity 53.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 07417-6800
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UNMER: US/09/336,039
FILING DATE: 18-Jun-1999
                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      You, Qimin
TITLE OF INVENTION: Identification of a DNA Region
Potentially Useful for the Detection of Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 20 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67;
                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Becton Dickinson and Company
STREET: 1 Becton Drive
CITY: Franklin Lakes
STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
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                                                Conservative
                                             6.3%; Score 31.6; DB 4; Length 311; 53.2%; Pred. No. 0.36; ative 0; Mismatches 59; Indels
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В
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                                                                                                                                                                                                                                                             Macches
                                                                                                                                                                                                                                                                                                  Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 201-848-9228 INFORMATION FOR SEQ ID NO: 19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 25-SEP-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Fugit, Donna R.
REGISTRATION NUMBER: 32.135
REFERENCE/DOCKET NUMBER: P.-
                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 311 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Identification of a DNA Region
TITLE OF INVENTION: Potentially Useful for the Detection of Mycobacterium
TITLE OF INVENTION: kansasii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 201-847-7166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Harris, James M. APPLICANT: You, Qimin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
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                                                                                                                                                                     148 CCGTAGGCATTTCGAYCGMGSKATGGCGRTCARGAGCAGCCWGGGACCAGMRSMCGCGTT 89
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                                                                                                                                                                                                             203 CCTAAGTAACTCTTACCACGTCACTAGGCCAAAGAGGGGCGTGGGGGTGAACGAAAGGGCT 262
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                                          323 CATCAC 328
                                                                                                                          263 CCCGAACTTTTTTTTCCAGCCAGGCCGAACGGGGGCTCGGTAATGATTGGCCAGGGCG 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
COPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Becton Dick:
STREET: 1 Becton Drive
CITY: Franklin Lakes
STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/937,580 FILING DATE: 25-SEP-1997 CLASSIFICATION: 435
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28 CATCGC 23
                                                                                     88 ACCCGAGTTCGTCGCCGCCACCGACGCCGACCCGTCGATGGCYGACGCATGGCTGGGCCG 29
                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Mycobacterium gastri and Mycobacterium ORGANISM: kansasii
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                                                                                                                                                                                                                                                                         Match 6.0%;
Local Similarity 47.6%;
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                                                                                                                                                                                                                                                     58; Indels
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RESULT 5
US-09-336-039-19/c
US-09-336-039-19/c
; Sequence 19, Application US/09336039
; Patent No. 6291176
; GENERAL INFORMATION:
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SEQUENCE DESCRIPTION: SEQ ID NO: 19:
US-09-336-039-19
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RESULT 6
US-09-103-840A-1
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Best Local S
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NAME: Fugit, Donna R.
REGISTRATION NUMBER: 32,135
REFERENCE/DOCKET NUMBER: 32,35
TELECOMMUNICATION TELEPHONE: 201-847-716
TELEPHONE: 201-847-716
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                           323 CATCAC 328
                                                                                                                                                                                                                                                        148 CCGTAGGCATTTCGAYCGMGSKATGGCGRTCARGAGCAGCCWGGGACCAGMRSMCGCGTT 89
                                                                                                                                                                                                                                                                                             263 CCCGAACTTTTTTTTTTCCAGCCAGGCCGAACGGGGGCTCGGTAATGATTGGCCAGGGCG 32
                                                                                   28 CATCGC 23
                                                                                                                                                                     88 ACCCGAGTTCGTCGCCGCCACCGACGCCGACCCGTCGATGGCYGACGCATGGCTGGGCCG 29
                                                                                                                                                                                                                                                                                                                                                           Match 6.0%;
Local Similarity 47.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION MUMBER: US/09/336,039
FILING DATE: 18-Jun-1999
PRIOR APPLICATION DATA:
APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 07417-6800
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
CORDENCESE: Becton Dickinson and Company
STREET: 1 Becton Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YOU, QIMIN
TITLE OF INVENTION: Identification of a DNA Region
Potentially Useful for the Detection of Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Harris, James M.
                                                                                                                                                                                                                                                                                                                                          60; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 311 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 08/937,580 FILING DATE: 25-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Franklin Lakes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Mycobacterium gastri and Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                          8; Mismatches
                                                                                                                                                                                                                                                                                                                                                           Score 30; DB 4; Length 311; Pred. No. 1.2;
                                                                                                                                                                                                                                                                                                                                       58; Indels
                                                                                                                                                                                                                                                                                                                                          0; Gaps
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; Sequence 1, Application US/09103840A ; Patent No. 6294328 ; GENERAL INFORMATION:

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Db 2151568 CAGGAGGCAGCCGGTAATCGTCTCAATCACTGCGCGCCTCGGCAAGCCGTGGTTTGTATGC 2151627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db 2151628 GGCGACACCGTTGCAGGATCCGCTCGGTTATCTCCCGGCTCTGGGGTGGGGTCCCACCTGC 2151687
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GENERAL INFORMATION US/08379580
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LENGTH: 4411529
TYPE: DNA
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APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN ANALYSIS IN MYCOBACTERIUM
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-2007.00
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin Ver. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Mycobacterium tuberculosis
OTHER INFORMATION: H37Rv
              APPLICATION NUMBER: FR 92/09433
FILING DATE: 03-JUL-1992
ATTORNEY/AGENT INFORMATION:
NAME: Smith, Julie K.
REGISTRATION NUMBER: 38,619
REFERENCE/DOCKET NUMBER: ST9204:
                                                                                                                                   PRIOR APPLICATION DATA:

APPLICATION NUMBER: WO PCT/FR93/00772

FILING DATE: 28-JUL-1993

PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Rd. 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Duchesne, Marc
APPLICANT: Schweighoffer, Fabien
APPLICANT: Tocque, Bruno
TITLE OF INVENTION: Peptides Inhibiting Ras Protein
TITLE OF INVENTION: Activity, Preparation and Use Thereof
                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   436 CTGTGA 441
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  376 AGCCCCAACCCCGGGGAATCCGAGCAGGTATATAAGGGGCCCAGCTAGAGCCCCAGGCAGA 435
ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: F
                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Collegeville
                                                                                                                                                                                                                                      CLASSIFICATION:
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52.4%;
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                   ST92049-US
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US-08-190-687B-7
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                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNIBER: 07/774,644
FILING DATE: 11-OCT-1991
PRIOR APPLICATION UNABER: 07/260,807
APPLICATION UNABER: 07/260,807
ETILING DATE: 21-OCT-1988
PRIOR APPLICATION UNMBER: 07/230,761
ETILING DATE: 10-AUG-1988
PRIOR APPLICATION UNMBER: 07/230,761
ETILING DATE: 10-AUG-1988
ATTORNEY_MAGNATION:
NAME: GASS, DAVIG A.
NAME: GASS, DAVIG A.
NAME: GASS, DAVIG A.
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Clar,
APPLICANT: Clar,
APPLICANT: Clar,
APPLICANT: Clar,
TITLE OF INVENTION: GAP Gene
TITLE OF SEQUENCES: 27
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
CTREET: 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL
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TELEPAX: (610)454-3808
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1548 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/0
FILING DATE: 02-FEB-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                         REFERENCE/DOCKET NUMBER: 27
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Gass, David A. REGISTRATION NUMBER: 38,153
                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPUTER: DEM PC COMPUTER: C-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM:
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Similarity 70.9%;
39; Conservative
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Martin, Georg
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1..1548
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                                                                                                                                                                                                                                                                                                                                                                                                                   Release #1.0, Version #1.30
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                                                                                                              27527/31898
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                                                                 ; MOLECULE TYPE: DNA (genomic) US-08-276-852-156
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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                                 Query Match
     Matches
                                                                                                                                                                                                        CLASSIFICATION 1914

PRIOR APPLICATION DATA:

APPLICATION UNBER: US 08/178,302

PILING DATE: 30-SEP-1993

PRIOR APPLICATION DATA:

APPLICATION UNBER: US 07/954,148

FILING DATE: 30-SEP-1992

ATTOMEY/AGENT INFORMATION:

NAME: FILLING, Thomas

RESISTRATION UNBER: 34,163

REFERENCE/DOCKET NUMBER: SCR1452P

TELECOMMUNICATION INFORMATION:

TELEPHONE: 619-554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                           TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 156:
SEQUENCE CHARACTERISTICS:
LENGTH: 13254 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/276,852
FILING DATE: 18-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Burton, Dennis R
APPLICANY: Barbas, Carlos F
APPLICANY: Lerner, Richard A
TITLE OF INVENTION: HUMAN NEUTRALIZING MONOCLONAL ANTIBODIES
TITLE OF INVENTION: TO HUMAN IMMUNODEFICIENCY VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WINDESSEE: Patent Counsel
STREET: 10666 No. 5652136th Torrey Pines Road, Suite 220,
STREET: Mail Drop TPC8
CITY: La Jolla
STATE: CA.
COUNTPY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: U
ZIP: 92037
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Nes 39; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
Match 5.9%;
Local Similarity 50.3%;
ses 72; Conservative
                                                                                                              STRANDEDNESS:
                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         156, Application US/08276852
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119..3259
                                                                                                   circular
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                                                                                                                  double
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0; Mismatches
 ; Score 29.4; DI; Pred. No. 11; 0; Mismatches
                                 DB 1;
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     71; Indels
                                 Length 13254;
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Patent No. 5652138
GENERAL INFORMATION:
APPLICANT: Burton, Dennis R
APPLICANT: Burton, Dennis R
APPLICANT: Barbas, Carlos F
APPLICANT: Lerner, Richard A
TITLE OF INVENTION: HUMAN MEUTRALIZING MONOCLONAL ANTIBODIES
TITLE OF INVENTION: TO HUMAN IMMUNODEFICIENCY VIRUS
                                                                                      Matches
                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 08/178,302
FILING DATE: 30-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/954,148
FILING DATE: 30-SEP-1992
ATTORNEY/AGENT INFORMATION:
NAME: FILTING, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: SCR1452P
                                                                                                                                                                                                                                  TELEPAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 170:
SEQUENCE CHARACTERISTICS:
LENGTH: 13254 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 10500 NO.
STREET: Mail Drop TPC8
CITY: La Jolla
STATE: CA
4287 GGGCAGGCATGACCTCAGCATTTGTTCCTGTAATCTTGACCCCAGCATACAAGCAGGCGC 4346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/276,852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8908 GGTAGTGAGCCTCCACGATATCCCTGCCATAGGCTTTGTCTGCGCCCCACACCACACAGTAAT 8849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8968 GGGCAGGCATGACCTCAGCATTTGTTCCTGTAATCTTGACCCCAGCATACAAGCAGGCGC 8909
                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 514
PRIOR APPLICATION DATA:
PRIOR APPLICATION UNIMBER: US 08/178,302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8848 ACGGACCTTGGGGCCCAGGAAAG 8826
                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116 GGGGGGTCACCTCCTCAGGTTTCGTTCCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCT 175
                         116 GGGGGGTCACCTCCTCAGGTTTCGTTCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCT 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       236 GAGGGGCGTGGGGTGAACGAAAG 258
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                          5.9%;
Similarity 50.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: The Scripps Research Institute, Office of E: Patent Counsel 10666 No. 5652138th Torrey Pines Road, Suite 220,
                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                     circular
                                                                                                                                                                                              DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JUL-1994
                                                                                    Score 29.4; DI Pred. No. 11; 0; Mismatches
                                                                                                                               DB 1; Length 13254;
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                                                                                         Indels
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                                                                                                                                                     Query Match
Best Local Similarity
Theres 72; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No.
GENERAL I
                                                                                                                                                                                                                                                                                                                                             TELEPAN: 619-554-6312
INFORMATION FOR SEQ ID NO: 156:
SEQUENCE CHARACTERISTICS:
LENGTH: 13254 base pairs
    8908 GGTAGTGAGCCTCCACGATATCCCTGCCATAGGCTTTGTCTGCGCCCACACCACCACAGTAAT 8849
                                                                                   8968 GGGCAGGCATGACCTCAGCATTTGTTCCTGTAATCTTGACCCCAGCATACAAGCAGGCGC 8909
                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: FITTING, Thomas
REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: SC
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: PLOY disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 07/954,148
FILING DATE: 30-SEP-1992
ATTORNEY/AGENT INFORMATION:
NAME: Fitting, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 24-JUL-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/276,852
FILING DATE: 18-JUL-194
APPLICATION NUMBER: US 08/178,302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 30-SEP-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: The Scripps Research Institute, Office of ADDRESSEE: Patent Counsel
STREET: 10666 No. 5770440th Torrey Pines Road, Suite 220, STREET: Mail Drop TPC8
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4407 ACGGACCTTGGGGCCCAGGAAAG 4429
                                                                                                               116 GGGGGGTCACCTCCTCAGGTTTCGTTCCAAACTTTTTGAAACCCTAATTGGTGGCCT 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: LETNET, RICHARD A MEDITALIZING MONOCLONAL ANTIBODIES TITLE OF INVENTION: TO HUMAN IMMUNODEFICIENCY VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
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                                          176 CTGAGTGGGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCACTAGGCCAAA 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           236 GAGGGGCGTGGGGTGAACGAAAG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  176 CTGAGTGGGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCACTAGGCCAAA 235
                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              156, Application US/08899575
). 5770440
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92037
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                                                                                                                                                                      Conservative
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Barbas, Carlos F
                                                                                                                                                                                                                                                                                               circular
                                                                                                                                                                                                                                                                     DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-SEP-1993
                                                                                                                                                                                    5.9%;
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                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SCR1452P
                                                                                                                                                                                       Score 29.4;
Pred. No. 11;
                                                                                                                                                                                                       DB 1; Length 13254;
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                                                                                                                                                                 0; Gaps
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Patent No.
                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 170:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DAMA:
APPLICATION NUMBER: US 08/276,852
FILING DATE: 18-JUU-1994
APPLICATION NUMBER: US 08/178,302
FILING DATE: 30-SEP-1993
PRIOR APPLICATION DAMA:
APPLICATION NUMBER: US 07/954,148
FILING DATE: 30-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL
                                                                                                                                         4287 GGGCAGGCATGACCTCAGCATTTGTTCCTGTAATCTTGACCCCAGCATACAAGCAGGCGC 4346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Burton, Dennis R
APPLICANT: Barbas, Carlos F
APPLICANT: Lerner, Richard A
TITLE OF INVENTION: HUMAN NEUTRALIZING MONOCLONAL ANTIBODIES
TITLE OF INVENTION: TO HUMAN IMMUNODEFICIENCY VIRUS
                                                           4347 GGTAGTGAGCCTCCACGATATCCCTGCCATAGGCTTTGTCTGCGCCCACACCACACAAGTAAT 4406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 619-554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8848 ACGGACCTTGGGGCCCAGGAAAG 8826
                                                                                                                                                                    116 GGGGGTCACCTCCTCAGGTTTCGTTCCAAACTTTTTGAAACCCTAATTGGTGGCCT 175
236 GAGGGGCGTGGGGTGAACGAAAG 258
                                                                                                 176 CTGAGTGGGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCACTAGGCCAAA 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   236 GAGGGGCGTGGGGTGAACGAAAG 258
                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 13254 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: The Scripps Research Institute, Office of ADDRESSEE: Patent Counsel STREET: 10666 No. 5770440th Torrey Pines Road, Suite 220, STREET: Mail Drop TPC8
                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 24-JUI
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OPERATING SYSTEM:
                                                                                                                                                                                                                          Local Similarity es 72; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /U, Application US/08899575
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SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-JUL-1997
                                                                                                                                                                                                                                           5.9%; Score 29.4; DB 1; Length 13254; 50.3%; Pred. No. 11;
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Gaps

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4407 ACGGACCTTGGGGCCCAGGAAAG 4429

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Sequence 156, App.
                                                                                                                                                                                                                                                                   Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 619-554-6312
INFORMATION FOR SEQ ID NO: 156:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 07 FILING DATE: 30-SEP-1992 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US U8/4//--
FILING DATE: 18-JUL-1994
APPLICATION NUMBER: US 08/178,302
FILING DATE: 30-SEP-193
FRIDR APPLICATION DATA: 30-SEP-193
PRIOR APPLICATION NUMBER: US 07/954,148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                           8908 GGTAGTGAGCCTCCACGATATCCCTGCCATAGGCTTTGTCTGCGCCCACACCACCAGTAAT 8849
                                                                                                                                                      8968 GGGCAGGCATGACCTCAGCATTTGTTCCTGTAATCTTGACCCCAGCATACAAGCAGGCGC 8909
                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
8848 ACGGACCTTGGGGCCCAGGAAAG 8826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION: TELEPHONE: 619-554-2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                             176 CTGAGTGGGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCACTAGGCCAAA 235
                                                                                                                                                                             116 GGGGGGTCACCTCCTCAGGTTTCGTTCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCT 175
                                    236 GAGGGGCGTGGGGTGAACGAAAG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 10666 NO. 5804
STREET: Mail Drop TPC8
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Fitting, Thomas REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 24-JUI
                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                            Local Similarity 50.3 es 72; Conservative
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                                                                                                                                                                                                                                                                                                                                                         H: 13254 base pairs
nucleic acid
DEDNESS: double
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Barbas, Carlos F
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UMBER: US/08/899,575
24-JUL-1997
                                                                                                                                                                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                                                           50.3%;
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Pred. No. 11;
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US-08-899-575-170
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                                                                                                                                                                                                                                                                       Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 10660 NO. TPC8
STREET: Mail Drop TPC8
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 30-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0'
FILING DATE: 30-SEP-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Lerner, TITLE OF INVENTION: TITLE OF INVENTION:
4407 ACGGACCTTGGGGCCCAGGAAAG 4429
                                                                           4347 GGTAGTGAGCCTCCACGATATCCCTGCCATAGGCTTTGTCTGCGCCCACACCACCACAGTAAT 4406
                                                                                                                                                      4287 GGGCAGGCATGACCTCAGCATTTGTTCCTGTAATCTTGACCCCAGCATACAAGCAGGCGC 4346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION: TELEPHONE: 619-554-2937
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                                 236 GAGGGGCGTGGGGTGAACGAAAG 258
                                                                                                                 176 CTGAGTGGGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCACTAGGCCAAA 235
                                                                                                                                                                                          116 GGGGGGTCACCTCCTCAGGTTTCGTTCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCT 175
                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: doub
TOPOLOGY: circular
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 34,163
REFERENCE/DOCKET NUMBER: SC
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                                                                                                                                                                                                                                                      Local
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                                                                                                                                                                                                                                  h 5.9%;
Similarity 50.3%;
72; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: The Scripps Research Institute, Office of E: Patent Counsel 1066 No. 5804440th Torrey Pines Road, Suite 220,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/08899575
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                                                                                                                                                                                                                                                                                                                                 DNA (genomic)
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HUMAN NEUTRALIZING MONOCLONAL ANTIBODIES
TO HUMAN IMMUNODEFICIENCY VIRUS
170
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Carlos F
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                                                                                                                                                                                                                               Score 29.4; DB 1; Length 13254; Pred. No. 11; 0; Mismatches 71; Indels 0;
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PCT-US95-08743-156/c

Sequence 156, Application PC/TUS9508743

0;

RESULT 15

GENERAL INFORMATION:

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GENERAL INFORMATION:
APPLICANT:
APPLICANT:
TITLE OF INVENTION: TO HUMAN NEUTRALIZING MONOCLONAL ANTIBODIES
TITLE OF INVENTION: TO HUMAN IMMUNODEFICIENCY VIRUS
NUMBER OF SEQUENCES: 170
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN PC-DOS/MS-DOS
SOFTWARE: PATENTIN DATA:
APPLICATION NUMBER: PCT/US95/08743
FILING DATE: 11-JUL-1995
PRIOR APPLICATION NUMBER: US 08/276,852
FILING DATE: 18-JUL-1994
INFORMATION FOR SEQ ID NO: 156:
SEQUENCE CHARACTERISTICS:
LENGTH: 13254 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: Circular
MOLECULE TYPE: DNA (genomic)
PCT-US95-08743-156
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Search completed: October 10, 2002, 18:44:40 Job time: 1790.73 secs
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                                                                                                                                                                                                                                                                  8848 ACGGACCTTGGGGCCCAGGAAAG 8826
                                                                                                                                                                                 8908 GGTAGTGAGCCTCCACGATATCCCTGCCATAGGCTTTGTCTGCGCCCACACCCACACTAAT 8849
                                                                                                                                                                                                          176 CTGAGTGGGCCTCGTGGACTCCCGCCTAAGTAACTCTTACCACGTCACTAGGCCAAA 235
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Result
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Maximum DB seq length: 2000000000
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Perfect score:
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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                                            39.2
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Listing first 45 s
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BB785045
AI635942
BE115984
                             CNS009WF
AZ187858
BE118654
CNS0091P
BF376636
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AI048408
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AZ557857
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                                                                                             BB785045 BB785045
AI635942 tz28d09.x
BE115984 UI-R-BS1-
AI322516 mh62e08.y
                             AL054018 prosophil
AZ187858 SP 1010 A
BE118654 UI-R-BS1-
AL053013 prosophil
BE376636 CM3-TN006
                                                                                                                                                                              BB619413 BB619413
AI048408 uh55g06.r
AL107216 Drosophil
AZ557857 RPCI-23-2
                                                                                                                                                 AI046981 uh53d05.r
AL214492 Tetraodon
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VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 1
BB619413
LOCUS
                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
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                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 632)

Arakawa, T., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hiramoto, K., Hori, F., Ishi, Y., Ito, M., Kawai, J., Konno, H., Kouda, M., Koya, S., Matsuyama, T., Miyazaki, A., Nomura, K., Ohno, M., Okazaki, Y., Okido, T., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Takeda, Y., Tanaka, T., Toya, T., Muramatsu, M. and Hayashizaki, Y., RIKEN Mouse ESTs (Arakawa, T., et al. 2001)
Unpublished (2001)
Unpublished (2001)
Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Pujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y.
                                                                                                                                                 Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japrel: 81-45-503-9222
Tel: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BB619413 RIKEN full-length enriched, 8 days embryo Mus musculus cDNA clone 5730543H16 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
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AL053013 prosophil
AL065132 prosophil
AL266926 Tetraodon
BB551914 BB551914
AI503776 vm12c06.x
BH179653 015_G_08-
AL616605 T7 end of
B1645296 OP3151 Mi
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AL106054 Drosophil
BF402451 UI-R-CA0-
AW009306 ws80f02.x
AQ741137 HS_2273_A
ALD65584 Drosophil
BM415169 OP20241 M
AG043844 Pan trog1
AL074642 Drosophil
BG076658 H3004C01-
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BB809337 BB809337
AI324665 ms63a02.x
AL101589 Drosophil
AL053474 Drosophil
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BG324697 602422671
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RESULT 2
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Mus musculus
Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 528)
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Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara
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GAGAGAGAGAGAGAGCTCTTTTTTTTTTTTTVN 3'], CDNA was prepared by using trehalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. CDNA went through one round of subtraction to Rot = 100.0 Second strand cDNA was prepared with the primer adapter of sequence [5'
GAGAGAGATTCGGGGTTAATTPAATTCGCCCCCCCCC 3']. cDNA was cloned into the XhoI and BamHI sites. Vector: a modified pBluescript KS(+) after bulk excision from Lambda FLC I. Cloning sites, 5' end: SalI; 3' end: BamHI."

09 a 226 c 210 g 85 t 2 others
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/strain="057BL/6J"
/db_xref="taxon:10090"
/clone="5730545H16"
/clone_lib="RIKEN full-length enriched, 8 days embryo"
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/dev_stage="8 days embryo"
/lab_host="DH10B"
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Drosophila melanogaster genome survey sequence T7 end of BAC
BACN16G16 of DrosbAC library from Drosophila melanogaster (fruit
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Unpublished (1996)
Contact: Marra M/Mouse EST Project
                    Submitted (23-JUL-1999) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr
                                                                                                                                                                                                            Drosophila melanogaster
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Washington University School of MedicineP
4444 Forest Parkway, Box 8501, St. Louis, MO 63108
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                                                                                         Genoscope.
                                                                                                              Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 1101)
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                                                                         Direct Submission
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This clone is available royalty-free through LLNL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                    fruit fly.
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  Web
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314 286 1810
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: www.genoscope.cns.fr)
                                                                                                                                                                                                                                                                                                                               genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified p773 vector. Library went through two rounds of normalization, and was constructed by Bento Soares and M.Fatima Bonaldo."

191 c 177 g 67 t
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with a modified polylinker; Site_1: Not I; Site_2: Eco RI;
ist strand cDNA was primed with a Not I - oligo(dT) primer
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/clone="myAGE:1749370"
/clone_lib="Soares_embryonic_stem_cell_NMES"
/cell_type="embryonic stem cell"
/lab_host="DH10B"
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Pred. No. 0.3;
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                  segref@genoscope.cns.fr
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                                                                  Contact: Shaying Zhao
Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville, MD 20850, USA
Tel: 301 838 0208
Fax: 301 838 0208
Fax: 301 838 0208
                                                                                                                                                                                         Unpublished (1999)
Other_GSSs: RPCI-23-205J6.TV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RPCI-23-205J6.TJ RPCI-23 Mus musculus genomic clone RPCI-23-205J6,
                                   Email: szhao@tigr.org
Clones are derived from the mouse BAC library RPCI-23. For BAC
                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Musidaes 1 to 467)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA sequence.
library availability, please contact Pieter de Jong (pieter@dejong.med.buffalo.edu). Clones may be purchased from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AZ557857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8.5%; Score 42.6; DB 12; Length Similarity 26.6%; Pred. No. 0.5; Onservative 77; Mismatches 113; Indels
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/clone="BACN16G16"
/note="end : T7"
a 170 c 171 g
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/plasmid="pBeloBAC11"
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BACPAC Resources (http://bacpac.med.buffalo.edu/orderingframe.htm) or from Resea ch Genetics (lnfo@resgen.com). BAC end page: http://www.tigr.org/tdb/bac.ends/mouse/bac_end_intro.html plate: 205 row: J column: 6 Seq primer: SP6 Class: BAC ends.
                    /note-"Organ: Kidney/Brain: Vector: pBACe3.6; Site_1: EcoRI; Site_2: EcoRI; Female C57BL/6J mouse kidney and/or brain genomic DNA was isolated and partially digested with a combination of EcoRI and EcoRI Methylase. Size selected DNA was cloned into the pBACe3.6 vector at the EcoRI sites. The ligation products were transformed into DH10B electrocompetent cells (BRL Life Technologies). "
                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:10090"
/clone="RPCI-23-205J6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/strain="C57BL/6J"
89 t
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167 TGGTGGCCTCTGAGTGGGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCAC 226 360 TGTTATGGACATTCTGGCTGGCATACCCGTTCCCTACCCCAAACTTTCTAGCCTAGGGAT 301 47 TGTTTTCTAAATTCCGAAGCGCCCCTCTGCCCCCCCCAATCTGCGTTGCGTCGGGGG 106 TGGGCTGAGTCTCCTTCACCCAGCATCTCTGATTCCTGTAGAACCTAGCCATTTCGATTA 241 TGCTGGCCTCTTGCTTGGACTCTTGGTCTCCTGGCTTCTTGGTCTCCAGGCCCTCTTCTC 181 TGGGGGGTGGGGGGTCACCTCCTCAGGTTTCGTTCTTTCAAACTTTTTGAAACCCTAAT 166 Score 42.4; DB Pred. No. 0.48; Mismatches DB 12; 96; Indels Length 467; 0; Gaps 0,

Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
WashIngton University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus. 1 to 61)

Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, M., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Mooreis, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and uh53d05.rl Soares\_embryonic\_stem\_cell\_NMES Mus musculus cDNA clone IMAGE:1749129 5' similar to SW:SOX3\_HUMAN P41225 SOX-3 PROTEIN. ;, The WashU-HHMI Mouse EST Project 61 bp mRNA linear EST 08-JUL-1998

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tetraodon nigroviridis
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei
Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
Submitted (12-APR-2000) to the EMBL/GenBank/DDBJ databases This sequence is a single read and was generated as part of a large scale clone-end sequencing project of the Tetraodon nigroviridis
                                                                                                                                                                                                          Roest Crollius, H., Jaillon,O., Dasilva,C., Bouneau,L., Fisher,C., Bernot,A., Fizames,C., Wincker,P., Brottier,P., Quetier,F., Saurin,W. and Weissenbach,J.

Human gene number estimate provided by genome wide analysis using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CNS02UHV 1000 bp DNA linear GSS 15-MAY-2
Tetraodon nigroviridis genome survey sequence T7 end of clone
167C22 of library G from Tetraodon nigroviridis, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                   Bouneau, L., Billault, A., Quetier, F., Saurin, W., Bernot, A. and Weissenbach, J.
                                                                                    Direct Submission
                                                                                                            Genoscope
                                                                                                                                                                Unpublished
                                                                                                                                                                                        Tetraodon nigroviridis DNA sequence
                                                                                                                                                                                                                                                                                              2 (bases 1 to 1000)
Roest-Crollius, H., J
                                                                                                                                                                                                                                                                                                                                      Unpublished
2 (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                     Charaterization and repeat analysis of the compact genome of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 1000)
Roest-Crollius, H., Ji
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Possible reversed clone: similarity on wrong strand
Seg primer: -28m13 rev2 Er from Amersham
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This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tetraodon nigrovirid:
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/clone_lib="Soares_embryonic_stem_cell_NMES"
/cell_type="embryonic stem cell"
/lab_host="DH10B"
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                                                Email: genome-resegsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh
Carninci,P., Shibata,Y., Muramatsu,M. and Hayashizaki,Y.,
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura
.S., Kawal,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                           Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Y., Ito,M., Kawai,J., Kojima,Y., Konno,H., Kouda,M., Matsuyama,T., Nakamura,M., Nishi,K., Nomura,K., Numasaki,R., Okazaki,Y., Okido,T., Salato,R., Sakai,C., Sakazi,C., Sakazi,C., Sakazi,C., Sakazi,D., Sato,K., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Suzuki,H., Tagawa,A., Takahashi,F., Takaku-Akahira,S., Tanaka,T., Tomaru,A., Toya,T., Watahiki,A., Yasunishi,A., Muramatsu,M. and Hayashizaki,Y., Watahiki,A., Yasunishi,A., Muramatsu,M. and Hayashizaki,Y.
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RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Akimura, T., Arakawa, T., Carninci, P., Furuno, M., Hanagaki, T., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Imotani, K.,
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http://www.genoscope.cns.fr/Tetraodon
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                                                                                                                                                                                                                                                                                                                                                                                                     I-7-22 Suehiro-cho,
Tel: 81-45-503-9222
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/Ob_xref="taxon:99883"
/Clome="1.67C22"
/Clome_1ib="G"
/note="Genoscope sequence ID : COAG167BB11LP1-end : T7"
/note="Genoscope sequence ID : COAG167BB11LP1-end : T7"
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cem cell CRL-2070
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RESULT 8
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67; Conserv
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                                                                                                                                                                                                                                                               CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 1430 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara
                                                                                                                                                                                                                Seq primer: -40UP from Gibco High quality sequence stop: 313.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1997)
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/clone_lib-"RIKEN full-length enriched, Nullipotent stem
/clone_Lib-"RIKEN full-length enriched, Nullipotent stem
/cell_type="Nullipotent stem cell"
/cell_type="Nullipotent stem cell"
/cell_line="CRL-2070 NE"
127 c 95 g 127 t
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adenocarcinoma, 3 pooled tumors
                             /organism-"Homo sapiens"
/db_xref-"taxon:9606"
/clone-"IMAGE:2289905"
/clone_lib-"NCI_CGAP_Ut2"
/tissue_type-"moderately-differentiated endometrial
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Pred. No. 4.6;
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RESULT 9
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                                                                                                                                                                                                                                                                                                                                                                                                                        Email: msoares@blue.weeg.ulowa.edu
The sequence contained an ollop-dT track that was present in the
oligonucleotide that was used to prime the synthesis of first
strand cDNA and therefore this may represent a bonafide poly A
tail. The sequence tag present in the cDNA between the NotI site
and the oligo-dT track served to verify it as a clone from the
normalized embryo at 13 dpc library cDNA Library Preparation: M.B
soares lab clone distribution: cmlones will be available through
Research Genetics (www.resgen.com) The following repetitive
elements were found in this cDNA sequence: 1-85, >(GAA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Soares, MB
Program for Rat Gene Discovery and Mapping
University of Iowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Norway rat.
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE115984 529 bp mRNA linear EST 13-JUN-:
UI-R-BS1-axy-c-02-0-UI.s1 UI-R-BS1 Rattus norvegicus cDNA clone
UI-R-BS1-axy-c-02-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   discovery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bonaldo, M.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE115984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tel: 319 335 8250 Fax: 319 335 9565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genome Res. 6 (9), 791-806 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Normalization and subtraction: two approaches to facilitate gene
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                                                                                                                                                                                                                                                                                                                                                           POLYA=Yes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 451 Eckstein Medical Research Building Iowa City, IA 52242, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
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                                                                                                                                                                                                                                                                                                                                                                              primer: M13 Forward
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/note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: Sall;
/site_2: Not1; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.85 kb. Life Technologies catalog %
11539-012"
/dev_stage="embryonic 13 dpc"
/lab_host="DH10B (Life Technologies)"
/lab_host="DH10B (Life Technologies)"
/note="Vector: pT73D-Rac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The UI-R-BS1
library is derived from 13 dpc whole embryo tissue. For a
detailed description of the library from which this clone
was derived, please visit our web site at
                                                                                                                                                                             /strain="Sprague-Dawley"
/db_xref="taxon:10116"
/clone="UI-R-BS1-axy-c-02-0-UI"
/clone_lib="UI-R-BS1"
                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                organism="Rattus norvegicus"
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Pred. No. 10;
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catalog #:
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RESULT 10
AI322516
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184 GCCTCGTGGACTCCCGCCTCCTA 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220 TCAGACGGTTCTTTTGCTTTTCTTTTCTGTCTTGGCTAACTCCTTGGCCAGCTCTGAGCGG 279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124 ACCTCCTCAGGTTTCGTTCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCTCTGAGTGG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               160 AGCGCTTCGCTGGACTCGCCCCTCACCCTTTCGGACTTTGGAGGGTTTTTTCTGGGGGCCTTC 219
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Local Similarity 53.8%;
es 77; Conservation
                                                                                                                                                                                                                                                                                                   High quality sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AI322516 658 bp mRNA linear EST 23-DEC-199 mh62e08.yl Soares mouse placenta 4NbMPl3.5 14.5 Mus musculus cDNA clone IMAGE:455588 5' similar to gb:X71137 SOX-9 PROTEIN (HUMAN);
                                                                                                                                                                                                                                                                                                                                                  correct orientation)
Seq primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 to 658)

1 (bases 1 to 658)

Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                                             This read is a RESEQUENCE of a previously sequenced mouse clone This read has been verified (found to hit its original self in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                 IMAGE Consortium (info@image.llnl.gov) for further information. {\tt MGI:272446}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: mouseest@watson.wustl.edu
This clone is available royalty free through LLNL; contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The WashU-HHMI Mouse EST Project
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314 286 1810
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TAG_LIB=UI-R-BS1
TAG_TISSUE=embryo at 13 dpc
TAG_SEQ=AATCC"
/note="Organ: placenta; Vector: pT7T3D-Pac (Pharmacia)
with a modified polylinker; Site_1: Not I; Site_2: Eco
                                                                      /tissue_type="placenta"
/dev_stage="adult"
                                                                                                                          /sex="unknown"
                                                                                                                                                   /clone_lib="Soares mouse placenta 4NbMP13.5 14.5"
                                                                                                                                                                           /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:45558"
                                                      /lab_host="DH10B"
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Pred. No. 11;
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Best Local
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746 ARAKTKTTTGGCCAAWGCTCGDSGGGACCCCCCCCCCCCCCCCCCCCCCCCCCCCGGGGGG 687
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                                           Local
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                                                                                                                                                                                                                                                                                                                                                               AL Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (E-mail : segref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Oscogawa and Aaron Mammoser in Pleter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic strain y2; cn bw sp, the same strain used for the BDGP's Pl and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CNS009WF GSS 03-JUN-1999
Drosophila melanogaster genome survey sequence T7 end of BAC #
BACR20M21 of RPCI-98 library from Drosophila melanogaster (fruit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drosophila melanogaster
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
1 (bases 1 to 777)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSS
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                                                                                                                 Similarity
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                                                                                            Conservative
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240 c 217 g 77 t 2 others
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                                                                                                                                                                                                                                                       /clone_lib="RPCI-98"
/clone="BACR20M21"
                                                                                                                                                                                                                                                                                                   /organism="Drosophila melanogaster"
/db_xref="taxon:7227"
                                                                                                                                                                                                         /note="end : T7"
128 c 154 g
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                                                                                                                 7.58;
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                                                                                            19;
                                                                                                                 Score 37.4;
Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
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Pred. No. 12;
                                                                                          Mismatches
                                                                                                                                                                                                           237 t
                                                                                                                                        DB 12;
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                                                                                                                                        Length 777;
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RESULT 12
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                                                                                                   RESULT 13
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                                                                                                                                                                                                                              581 GGGGGGGGG 590
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
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Strongylocentrotus purpuratus.
Strongylocentrotus purpuratus
Eukaryota, Metazoa, Echinodermata; Eleutherozoa; Echinozoa;
Echinoidea; Euechinoidea; Echinocea; Echinoida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AZ187858 764 bp DNA linear GSS 30-AUG-2000 SP_101.AZ_E09_SP6E Strongylocentrotus purpuratus, purple sea urchin, sperm genomic BAC library Strongylocentrotus purpuratus genomic clone Plate=1010 Col=18 Row=I, DNA sequence.
BE118654 415 bp mRNA linear E
UI-R-BS1-azr-c-02-0-UI.sl UI-R-BS1 Rattus norvegicus
UI-R-BS1-azr-c-02-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pasadena California 91125, USA
Tel: (626) 395-8421
Fax: (626) 793-3047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cameron,R.A., Mahairas,G., Rast,J.P., Martinez,P., Biondi,T.R., Swartzell,S., Wallace,J.C., Poustka,A.J., Livingston,B.T., Wray,G.A., Ettensohn,C.A., Lehrach,H., Britten,R.J, Davidson,E.H. a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Division of Biology 156-29
California Institute of Technology
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: acameron@caltech.edu
Plate: 1010 row: I column
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A sea urchin genome project: Sequence scan, virtual map, and
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urchin, sperm genomic BAC library"
__note="Organ: sperm; Vector: BACe3.6; BAC Clones in E-Coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Strongylocentrotus purpuratus"
/db_xref="taxon:7668"
/clone="plate=1010 Col=18 Row=I"
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                                                                                                                                     280 GCCTCCTTGGNCCCCTCTTCCAA 302
                                                                                                                                                                                               184 GCCTCGTGGACTCCCGCCTCCTA 206
                                                                                                                                                                                                                                                         220 TCAGACGGTTCTTTTGCTTTTCTGTCTTGGCTAACTCCTTGGNCAGCTCTGAGCGG
                                                                                                                                                                                                                                                                                                                       124 ACCTCCTCAGGTTTCGTTCCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCTCTGAGTGG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 AGCGCCCCTCTGCCCCCCCCCAATCTGCTTGCGTCGGGGGTGGGGGGTGGGGGGGTC 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequence contained an oligo-dT track that was present in the oligonucleotide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. The sequence tag present in the cDNA between the NotI site and the oligo-dT track served to verify it as a clone from the normalized embryo at 13 dpc library cDNA Library Preparation: M.B. Soares Lab Clone distribution: clones will be available through Research Genetics (www.resgen.com) The following repetitive elements were found in this cDNA sequence: 1-85, >(GAA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Norway rat.
Rattus norvegicus
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BE118654.1 GI:8510759
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451 Eckstein Medical Research Building Iowa City, IA 52242, USA
Tel: 319 335 8250
Fax: 319 335 9565
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seq primer: M13 Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 7.4%; Score 37; DB 9; Length 415; Similarity 53.1%; Pred. No. 14;
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126 c
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/lab_host="helloB (Life Technologies)"
/lab_host="helloB (Life Technologies)"
/note="vector: pt773D-Pac (Pharmacia) with a modified
/note="vector: pt773D-Pac (Pharmacia) with a modified
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611 SGMSSSVSSSGGRSSGSGGGGGGGGGGGGGSGSSGGSSG 575
                                                 460 AACTCATCAGGTGCGAGAAGCCCGCGGGTTCCTGCTG 496
                                                                                                      400 CAGGTATATAAGGGGCCCAGCTAGAGCCCAGGCAGACTGTGAATGCGACCTGTTCGAGAG 459
                                                                                                                                                                                                                                                                                                                                                                                                                             850 SCGCCGCGMABCCMCSSSSSCCGSASARGVKVRASGGAGKRGGGSGGASASHSSSSACBS 791
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pleter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic Strain y2; cn bw sp, the same strain used for the BDGP's and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be trainstrain.
                                                                                                                                                                                                               SCSSSVSCSSVASSMSCSSBSSSSASASSSSS-SSSASCASCSCCCTSWSCSCSTSASMS 672
                                                                                                                                                                                                                                                              CAATCACGGGTCCTCCGGGGTTGCGAGGGGGCGGACCCAAGCCCCAACCCCGGGGAATCCGAG 399
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage : BP 191 91006 EVRY cedex - FRANCE (B-mail : segref@genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 925)
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/db_xrei="taxon:7227"
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153 TTTCTCTTGAACCTCTACCTCTCTACCACCATTACCACCTCTC 196
                                          183 GGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCAC 226
                                                                                                                                        123 CACCTCCTCAGGTTTCGTTCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCTCTGAGTG 182
                                                                                                93
                                                                                                                                                                                                             Local
                                                                                             Fax: +55-11-2707001

Email: asimpsoneludwig.org.br

This sequence was derived from the FAPPESP/LICR Human Cancer Genome

Project. This entry can be seen in the following URL

(http://www.ludwig.org.br/scripts/gethtm12.pl?t1=CM3&t2=CM3-TN0068-
140800-286-g078t3=2000-08-14&t4=1)

Seq_primer: puc_18 forward
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF376636 196 bp mRNA linear EST 24-NOV-200
CM3-TN0068-140800-286-g07 TN0068 Homo sapiens cDNA, mRNA sequence.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                  Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev_stage="Adult"
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AAX59273
AAS64084
ABI99331
                                                                                                                                           SUMMARIES
          Human polynucleoti
Human adenosine Al
Human immune/haema
Human prostate cDN
                                                     Human small cell I
DNA encoding novel
Human polynucleoti
Human bone marrow
                                                                                                         Description
                               Human
Human
Human
   Mouse
  ischaemic
         prostate
                                                                                                                                                                                                                                                                                                                           RESULT 1
AAD11118
   (LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CANCER RES (CORR ) CORNELL RES FOUND INC.
                                                                                                                                                                                                    Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; synovial sarcoma; cytostatic; SOX3; ds.
                                                                                                                                                                                                                                                                                                                 AAD11118 standard; DNA; 2509 BP.
                                           21-JAN-2000; 2000US-0489101.
                                                                                                           WO200153349-A2.
                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                Human small cell lung cancer associated gene, SOX3.
                                                                                                                                                                                                                                                                       24-SEP-2001
                                                                                                                                                                                                                                                                                            AAD11118;
                                                                19-JAN-2001; 2001WO-US02015.
                                                                                       26-JUL-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                    Location/Qualifiers 441..1773
                                                                                                                                /product= "Human SOX3 protein"
                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                    4548
4758
16329
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14175
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25485
20445
811
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AAC11389
AAS59169
AAV84531
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AAL15399
AAS64368
ABA14807
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AAX25211
ABA08650
AB121297
AB121298
AAS27814
AAK78859
AAQ80198
AAS59570
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AAA08502
AAS31013
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AAK83468
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RESULT 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, lenguages associated gene the present sequence is a small cell lung cancer associated gene designated as NY-SCIC-9, encoding human SOX3 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by isolated nucleic acid comprising an NA Group 3 or 4 molecule.
          AAS87738 standard; cDNA; 2378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2509 BP; 456 A; 818 C; 757 G; 478 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 57; Page 98-99; 152pp; English.
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                                                                   481
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                                                                                                               421
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                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                               121 GTCACCTCCTCAGGTTTCGTTCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCTCTGAG
                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                   181 TGGGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCACTAGGCCAAAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TGGCCGGGGGATGGGGCCCCGGTCTGCCTTGACAGGGTTGCAAAGTTGTTTTCTAAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TGGCCGGGGGATGGGGCGCCGGTCTGCCTTGACAGGGTTGCAAAGTTGTTTTCTAAATTC 60
                                                                CCGCGGGTTCCTGCTGATTT 500
                                                                                                                                                                                                                                                                                                               TGGGCCTCGTGGACTCCCGCCTCCTAAGTAACTCTTACCACGTCACTAGGCCAAAGAGGG
                                                                                                               TAGAGCCCAGGCAGACTGTGAATGCGACCTGTTCGAGAGAACTCATCAGGTGCGAGAAGC
                                                                                                                                     TAGAGCCCAGGCAGACTGTGAATGCGACCTGTTCGAGAGAACTCATCAGGTGCGAGAAGC 480
                                                                                                                                                                                                       GTCACCTCCTCAGGTTTCGTTCCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCTCTGAG 180
                                                                                                                                                                                                                                                                                                                                                                                                                 2001-457597/49.
                                                                                                                                                           GCGAGGGGCGGACCAAGCCCCAACCCCGGGGAATCCGAGCAGGTATATAAGGGGCCCCAGC
                                                                                                                                                                                                                                                      GCGAGGGGCGGACCAAGCCCCAACCCCGGGGAATCCGAGCAGGTATATAAGGGGCCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scanlan MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 500; DB 22; 100.0%; Pred. No. 2.9e-143; ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jager D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Old LJ, Gure AO, Chen Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 2509;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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The invention relates to isolated polynucleotide (I) and C polymeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The C polynucleotides are also used in diagnostics as expressed sequence tags CC for identifying expressed genes. (I) is useful in gene therapy techniques CC (II), (II) is useful in gene therapy techniques CC (II), (II) is useful for generating annibodies against it, detecting or CC (III, (II) is useful for generating annibodies against it, detecting or CC (III, (II) is useful in medical imaging of sites expressing (II), (I) and (II) are useful in medical CC imaging of sites expressing (II), (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. C The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations CC responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and CC andno acid sequences. Ass64197-AAS94564 represent novel human CC Note: The sequence data for this patent did not appear in the printed CC specification, but was obtained in electronic format directly from WIPO CC at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local '
                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess highly-residue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAS87738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID No 23542; 103pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-OCT-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-FEB-2002
                                                                                                                                                                                                                 339
                                                                                                                                                                                                                                                                                444 TGCTGCCAGGCCGAACGGGGGCTCGGTAATGATTGGCCAGGGCGCATCACTGCGAACCTG 503
564 GCAGG 568
                                                                       399 GCAGG 403
                                                                                                                                          504 TCAATCACGGGTCCTCCGGGTTGCGAGGGGGCGAACCCCAACCCCGGGGAATCCGA 563
                                                                                                                                                                                                                                                                                                                                                       279 TCCAGCCAGGCCGAACGGGGGCTCGGTAATGATTGGCCAGGGCGCATCACTGCGAACCTG 338
                                                                                                                                                                                 TCAATCACGGGTCCTCCGGGTTGCGAGGGGGGGGACCAAGCCCCAACCCCGGGGAATCCGA 398
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2378 BP; 590 A; 708 C; 664 G; 416 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         24.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 121.8; DB 23; Pred. No. 3.2e-27;
                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              2;
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                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to human polynucleotides (AAI79941-AAI93841) and the encoded proteins (AA000010-AA013910) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activites, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, immunomodulatory activity and activinyinhibin activity and may be useful in the diagnosis and/or treatment of cancer levicents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isolated nucleic acids and polypeptides, useful for preventing diagnosing and treating e.g. leukaemia, inflammation and immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-FEB-2000; 2000US-0515126
18-MAY-2000; 2000US-0577409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; lumunomodulatory; cancer; leukaemia; nervous system disorders; arthritis; inflammation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; SEQ ID NO 1882; 1399pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-FEB-2001; 2001WO-US04927.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-NOV-2001 (first entry)
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                                                                                                                                                                                                                                                                                                                        Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                      Sequence 506 BP; 151 A; 108 C; 150 G; 97 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                         treatment of cancer, leukaemia, nervous system disorders, arthritis and
                                                                                                                                                                                                                                                                                                                                                            inflammation.
229 GTGTGTTCCCCCCCCCCTTAA 209
                                187 TCGTGGACTCCCGCCTCCTAA 207
                                                                                                                                                                 госат
                                                                                                                                                                                                                                                                                                     ftp.wipo.int/pub/published_pct_sequences.
                                                                  2001-514838/56
                                                                                                 TCCTCAGGTTTCGTTCTTTCAAACTTTTTGAAAACCCTAATTGGTGGCCTCTGAGTGGGCC 186
                                                                                                                                   AA001891
                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu C, Drmanac RT;
                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                   8.48;
56.08;
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                                                                                                                                                                                                                     Score 41.8; DB Pred. No. 0.0067
                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                    DB 22;
                                                                                                                                                                                                  62;
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RESULT 5

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RESULT 4
ABA09613
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Best Local 9
                                                                                                                                                                                                                                                                                                            The present invention relates to bone marrow expressed polynucleotides and proteins. These sequences can be used in the treatment of inflammatory conditions (eg arthritis, Crohn's disease), cancer, central and peripheral nervous system diseases and neuropathies, such as Alzheimer's, Parkinson's and Huntington's diseases, spinal cord disorders, head trauma, cerebrovascular diseases, myeloid and lymphoid cell disorders, platelet disorders, stem cell disorders, bone degenerative disorders, autoimmune disorders, for example multiple sclerosis, diabetes and arthritis, viral and bacterial infections, after the present sequence is a DNA of the grant of the constitution of the present sequence is a DNA of the constitution of the present sequence is a DNA of the constitution of the constitution of the present sequence is a DNA of the constitution of the constitution of the present sequence is a DNA of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of the constitution of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antiinflammatory; antibacterial; immunosuppressive; vasotropic; cancer; antiparkinsonian; neuroprotective; nootropic; haemostatic; osteopathic; antiulcer; fungicide; antidabetic; antidasthmatic; antiallergic; immunostimulant; analgesic; cerebroprotective; antianaemic; infection; nervous system disorder; autoimmune disorder; inflammation; allergy; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABA09613;
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33-AUG-2000; 2000US-0649167.

23-AUG-2000; 2000US-0649267.

30-NOV-2000; 2000US-250583P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human bone marrow expressed oligonucleotide SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-JAN-2002
                                                                                                                                                                                                                                  Sequence 1468 BP; 508 A; 255 C; 301 G; 404 T; 0 other;
                                                                                                                                                                                                                                                                                            of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 184-185; 380pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New bone marrow-expressed nucleic acids and polypeptides, useful for diagnosis, treatment of inflammatory, autoimmune, neurological, cancer and increasing hematopoiesis, stem cell survival and bone growth and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-626375/72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-2001; 2001WO-US10472.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200174836-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; bone marrow; cytostatic; antirheumatic; antiarthritic; vulnerary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   remodeling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC.
                                         123 CACCTCCTCAGGTTTCGTTTCAAACTTTTTGAAACCCTAATTGGTGGCCTCTGAGTG 182
   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Liu C,
                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drmanac RT,
                                                                                                                                              7.6%;
                                                                                                                       Mismatches
                                                                                                                                              Score 38.2; DB Pred. No. 0.12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ford JE,
                                                                                                                                                                           DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Boyle
                                                                                                                       48;
                                                                                                                                                                              Length 1468;
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ID AAIS
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                                                                                                                                                                                                                                                                                  Query Match
Best Local (
                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to human polynucleotides (AAI79941-AAI93841) and the encoded proteins (AA000010-AA013910) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or activity.
                                                                                                                                                                                                                                                                                                                                    Sequence 379 BP; 99 A; 97 C; 81 G; 102 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                     Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; humanomodulatory; cancer; leukaemia; nervous system disorders; arthritis; inflammation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated nucleic acids and polypeptides, useful for preventing diagnosing and treating e.g. leukaemia, inflammation and immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-FEB-2000; 2000US-0515126.
18-MAY-2000; 2000US-0577409.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-SEP-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID NO 12207; 1399pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-PSDB; AA012216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAI92147 standard; cDNA; 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                treatment of cancer, leukaemia, nervous system disorders, arthritis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-FEB-2001; 2001WO-US04927.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200164835-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human polynucleotide SEQ ID NO 12207.
                                           365 T 365
                                                                            175 T 175
                                                                                                                305 GGCAGCCACACCCCTTTGGGTTGTTTTTTCCAAACATTTTAAGTCCCGGGTTTTTTGCC
                                                                                                                                    115 GGGGGGGTCACCTCCTCAGGTTTCGTTCCTTTCAAACTTTTTTGAAACCCTAATTGGTGGCC 174
                                                                                                                                                                                    245 AAACTGGGCCGGGCACCCCCCCCCCCCCCCCAGAAAACCTCTCCTTCGGGTGGTCCTGGG 304
                                                                                                                                                                                                                        2001-514838/56.
                                                                                                                                                                                                                                                                   68;
                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu C,
                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                              56.2%;
                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                              Score 36.2; DB Pred. No. 0.32;
                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                  DB 22;
                                                                                                                                                                                                                                                               53; Indels
                                                                                                                                                                                                                                                                                              Length 379;
                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                               0;
Db 109573 CCCACCCNNHNNNSGGGGCCCVAGNNHNNNSGGGGCCCVAGGNNHNNNSGGGGCCCVAGG 109514
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RESULT

Matches

7.1%; Similarity 32.9%; Conservative

23;

Score 35.4; DE Pred. No. 3.9; 23; Mismatches

DB 20; 116;

Length 114955; Indels

0

280 CCAGCCAGGCCGAACGGGGGCTCGGTAATGATTGGCCCAGGGCGCATCACTGCGAACCTGT 339

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CC trespiration describes antisense oligonucleotides (AAX52869-X55271)
CC directed against at least 2 mRNAs selected from target genes, coding and con-coding regions of RNAs corresponding to target genes, gene (initiation codons, genomic flanking regions, intron exon borders, the color from the 3'-end and the juxta section between coding and non-coding common and all segments of RNAs encoding proteins associated with one codons and all segments of RNAs encoding proteins associated with one coding common and conditions or mixtures. The antisense oligonucleotides conditions or mixtures. The antisense oligonucleotides conditions or mixtures and conditions. Typical diseases and conditions are those associated with impaired respiration and conditions are those associated with impaired respiration and conditions are those associated with impaired respiration and conditions are those associated with impaired respiration and conditions are those associated with impaired respiration and conditions. Typical diseases and conditions are those associated with impaired respiration and conditions are those associated with impaired respiration and conditions are those associated with impaired respiration and conditions. Cystic fibrosis, confilmmention, including lung diseases, pulmonary vasoconstriction, emphysema, chronic cobstructive pulmonary disease (OPPD), and cancers such as leukemias, cymphomas, carcinomas e.g. colon cancer, breast cancer, melanoma, concer, hepatocellular carcinoma, kidney cancer, melanoma, concer, hepatocellular carcinoma, kidney cancer, melanoma, concer, melanoma, metastasize concer and prostate cancer.
  Sequence 114955 BP; 6071 A; 29417 C; 36712 G; 21328 T; 21427 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 37; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-JUN-1998;
17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; bast cancer; lung cancer; pancreatic cancer; hepatic experiments; hepaticellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAX53491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAX53491 standard; DNA; 114955 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0093972
97US-0059160
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Oy 400 CAGGMANTANAGGGGCCCANAGCCAGACTSTGANTGGACTGTTCGACAG 459 Db 109453 CGACANNIHANNSGGGGCCCYAGGCGAGCCANHINNNSGG 109394 OY 460 AACTCATCACAGCCCAGACCANHINNNSGGGCCCYAGGCGAGCCCNHINNNSGG 109394 Db 109493 GGCCCCYAGGCCAGACCANHINNNSGGGCCCYAGGCGAGCCCNHINNNSGG 109394 AC AACS9273 STANDAGTG: CDNA; 686 BP. AC AACS9273 STANDAGTG: CDNA; 686 BP. AC AACS9273 STANDAGTG: CDNA; 686 BP. AC AACS9273: XX MACS9273 STANDAGTG: CDNA; 686 BP. AC AACS9273: XX MACS9273: XX	Qy 340 CAATCACGGGTCCTCCGGGTTGCGAGGGGCGGACCAAGCCCCAACCCCGGGGAATCCGAG 399
אה הים מים מים מים מים מים מים מים מים מים מ	PR PR
06-SEP-2000; 08-SEP-2000; 08-SEP-2000; 08-SEP-2000; 08-SEP-2000; 08-SEP-2000; 08-SEP-2000; 14-SEP-2000; 14-SEP-2000; 14-SEP-2000; 14-SEP-2000; 14-SEP-2000; 14-SEP-2000; 14-SEP-2000; 25-SEP-2000; 25-SEP-2000; 26-SEP-2000; 27-SEP-2000; 29-SEP-2000; 20-OCT-2000; 08-NOV-2000; 09-NOV-2000; 09-NOV-2000; 01-NOV-2000; 01-NO	01-SEP-2000; 05-SEP-2000; 05-SEP-2000;
2000US-0231414 2000US-0231243 2000US-0231243 2000US-0231244 2000US-0232080 2000US-023298 2000US-023239 2000US-023239 2000US-023239 2000US-023239 2000US-023239 2000US-0232401 2000US-0232401 2000US-0232401 2000US-0234498 2000US-0234498 2000US-0234498 2000US-0234498 2000US-0234583 2000US-0234583 2000US-023583 2000US-023583 2000US-023583 2000US-023583 2000US-023583 2000US-023637 20	2000US-0229345. 2000US-0229509. 2000US-0229513.

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                                                                                                                                                                                                                                                                                     AAK54951 to AAK64702 encode the human immune/haematopoletic antigen (I) cantivity, and can be used in gene therapy and vaccine production, (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent.

C diagnose and treat immune/haematopoletic-related diseases, especially cancers and cancer metastases of haematopoletic antigen genomic to AAK87694 represent human immune/haematopoletic antigen genomic sequences from the present invention. AAK4942 to AAK6450 and AAM82169 crepresent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                Query Match
Best Local S
Matches 95
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01-DEC-2000

05-DEC-2000

05-DEC-2000

06-DEC-2000

08-DEC-2000

08-DEC-2000

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08-DEC-2000
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17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
17-NOV-2000;
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17-NOV-
17-NOV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 4333; 3071pp + Sequence Listing; English.
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                                                                                                                                                                                                                                                                                   Sequence 686 BP; 164 A; 152 C; 184 G; 181 T; 5 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rosen CA, Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (HUMA-) HUMAN GENOME SCI INC
122 TTTAATTAAATGAGAAGATGAACGAGAGATGGACTTTACAGTAACACACTCCAGATTCTT 181
                               213 TCTTACCACGTCACTAGGCCAAAGAGGGGCGTGGGGGTGAACGAAAGGGGCTCCCGAACTTT 272
                                                                                                  153 TTTGAAACCCTAATTGGTGGCCTCTGAGTGGGCCTCGTGGACTCCCGGCCTCCTAAGTAAC 212
                                                                     62
                                                                                                                                                                        93 GCTTGCGTCGGGGGGGGGGGGGGGGGGGCTCACCTCCTCAGGTTTCGTTCTTTCAAACTT 152
                                                                                                                                          N
                                                                   TCTCCCCTGCTACCTGGGAGCCCATAGCTGGACCTGGGTGAGCACTGGGTTTTAAATTTT 121
                                                                                                                                        GCACGAGCCTGGGGTTATGGTTGGCAGGTCCAGCCCTGCATTGCTAATTCAGAGCATATC 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-483426/52.
                                                                                                                                                                                                                1 Similarity
95; Conserv
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                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                             48.5%;
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                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                               Score 34.4;
Pred. No. 1.
                                                                                                                                                                                                                                                  DB 22;
                                                                                                                                                                                                              101;
                                                                                                                                                                                                                                                  Length 686;
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              Query Match
Best Local (
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-MAR-2000;
09-MAY-2000;
12-MAY-2000;
13-JUN-2000;
27-JUN-2000;
10-AUG-2000;
                                                                                The invention relates to isolated prostate-specific polynucleotides, polypeptides, fusion proteins of the polypeptides, antibodies raised against the polypeptides (or antigent epitopes derived from them) and antigen-presenting cells expressing the polypeptides. The antibodies are useful for detecting the presence of cancer, especially prostate cancer. The polypeptides, polypucleotides and the antigen-presenting cells are useful for stimulating and/or expanding realls specific for a tumour protein, and for inhibiting the development of cancer especially prostate cancer. Compositions comprising the polypucleotide and/or polypeptide are useful for stimulating an immune response, and for treating cancer. The present sequence is a prostate specific polynucleotide of the invention.
                                                                                                                                                                                                                                                                                                                         New human prostate-specific polypeptides and polynucleotides useful for the diagnosis and treatment of cancer, especially prostate cancer \cdot
                                                        Sequence 637 BP; 149 A; 135 C; 149 G; 161 T; 43 other;
                                                                                                                                                                                                                                                                                               Claim 1; Page 502; 579pp; English.
                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-639232/73.
                                                                                                                                                                                                                                                                                                                                                                                                                                Xu J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-MAR-2001; 2001WO-US09919
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; prostate cancer; ss; cytostatic; immunostimulant; tumour.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human prostate cDNA sequence #565.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JAN-2002 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              182 ACTCATCCCAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          273 TTTTTTTCCAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                Dillon DC, Mitcham JL, H
GR, Retter MW, Stolk JA,
                                                                                                                                                                                                                                                                                                                                                                                                  Wang A,
               Similarity
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0536857.
2000US-0568100.
2000US-0570737.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0593793.
2000US-0605783.
2000US-0636215.
2000US-0651236.
2000US-0657279.
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            57.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288
 0; Mismatches
              Score 34.2; DI
Pred. No. 1.6;
                                                                                                                                                                                                                                                                                                                                                                                                  , Harlocker SL, Jiang Y,
JA, Day CH, Vedvick TS,
Hepler WT, Henderson RA;
                            DB 22; Length 637;
 42; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                Kalos MD;
Carter D;
 0;
 Gaps
 0
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B 84

59 TCCGAAGCGCCCCTTGCCCCCCCCCCCCATCTGCGTCGGGGGTGGGGGTGGGGGTGGGG

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RESULT 9
AB199331/c
ID AB199331/c
ID AB1993
XX AD1993
XX MOUSE
XX MOUSE
XX MOUSE
XX MOUSE
XX MOUSE
XX MOOZOOL
XX VOOZOOL
XX IS-MAY
XX IS-MAY
XX (UVNI-
YR 18-MAY
XX (UVNI-
YR (UVNI-
YR PP ISDB
XX (UVNI-
YR (UVNI-
YR (UVNI-
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes a method for examining ischaemic conditions, comprising measuring the expression levels of particular genes (I) in a test sample or determining the expression profile of a gene group in the sample comprising genes selected from (I). The method is useful for examining the ischaemic condition (e.g. compressive ischaemia, occlusive ischaemia or vascospastic ischaemia) by measuring expression levels of particular genes (AB199202 to AB19912, encoding the protein sequences in ABB57020 to ABB57374) or by determining the expression profile of a gene group comprising these genes. The expression profile or expression profile or expression profile or expression profile or expression profile or anouse group comprising these genes are used as an indicator when screening for ischaemic condition improving drugs or therapeutics for ischaemic diseases. AB19913 and AB19914 represent PCR primers for a mouse ischaemic condition related sequence, which are used in the exemplification of the present invention.
                                                             1712 CTCCTGATTTTATTATTCAATTTCTTTTCTACTAAAAAGTAGTCTTCGGTGGCTGGGAAGC 1653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 2; Page 579-582; 2690pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Examining the ischemic condition (e.g. occlusive ischemia) by measuring expression levels of particular genes defined in the specification or by determining the expression profile of a gene group comprising these
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-MAR-2002 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1714 BP; 478 A; 396 C; 442 G; 398 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ishikawa K, Asai S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-MAY-2000; 2000JP-0145977
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; ABB57093
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       128 TGGATACCTAAATCGAGTGNGTTCATTAAAAGTAGTTGA 166
                                                                                                                           129 CTCAGGTTTCGTTCTTTCAAACTTTTTGAAACCCTAATTGGTGGCCTCTGAGTGGGCCTC 188
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                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                 6.5%; Score 32.6; DB 24; Length 1714; ilarity 54.6%; Pred. No. 6.8; Conservative 0; Mismatches 54; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Takahashi Y, Nagata T,
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AMALI6674
ID AMALI6674
XX AALI667
AC AALI667
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AAK83468/C
ID AAK83468 standard; DNA; 16106 BP
Query Match
Best Local 9
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14-MAR-2000; 2000US-0189167.
24-MAR-2000; 2000US-019299.
29-MAR-2000; 2000US-0193480.
15-MAY-2000; 2000US-021315.
09-UUN-2000; 2000US-021315.
25-JUL-2000; 2000US-021334.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to human breast cancer expressed polynucleotides (AALO7544 -AAL26789) and methods of assessing whether a patient is afflicted with breast cancer by examining the correlation between the expression of certain markers and the cancerous state of breast cells. The polynucleotides and encoded polypeptides are potential markers for detecting, diagnosing, monitoring, characterising treating and encoded potentially preventing breast cancer. The polynucleotides and encoded potentially preventing breast cancer. The polynucleotides and encoded polypeptides are also useful for isolating compounds with cytostatic polypeptides.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 554 BP; 154 A; 124 C; 123 G; 153 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 1647-1648; 3695pp; English.
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                    Human immune/haematopoietic antigen genomic sequence SEQ ID
                                                                                                   07-NOV-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                500 TTTTTTTTTTTTT 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      142 CTTTCAAACTTTTT 155
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48; Conservative
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                                                                                              (first entry)
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2000US -024050 2000US -0241786 2000US -0241786 2000US -0241808 2000US -0241808 2000US -0246475 2000US -0246475 2000US -0246475 2000US -0246477 2000US -0246525 2000US -0246526 2000US -0246526 2000US -0246526 2000US -0246526 2000US -0246526 2000US -0246526 2000US -0246526 2000US -0246526 2000US -0246527 2000US -0246528 2000US -0246528 2000US -0246528 2000US -0246528 2000US -0246528 2000US -024928 2000US -024928 2000US -0249216 2000US -0251930 2000US -0251986 2000US -0251986 2000US -0251986 2000US -0251986 2000US -0251986	
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CC amino acid sequences given in AAM82170 to AAM91921. (1) have cytostatic contivity, and can be used in gene therapy and vaccine production. (I) CC proteins and polynucleotides may be used in the prevention, diagnosis and CC treatment of diseases associated with inappropriate (I) expression. For CC example, they may be used to treat disorders associated with decreased CC expression by rectifying mutations or deletions in a patient's genome CC that affect the activity of (I) by expressing inactive proteins or to CC supplement the patients own production of (I). Additionally, (I) CC polynucleotides may be used to produce the secreted (I), by inserting CC the nucleic acids into a host cell and culturing the cell to express the CC diagnose and treat immune/haematopoietic related diseases, especially CC cancers and cancer metastases of haematopoietic derived cells. AAK64703 CC cancers and cancer metastases of haematopoietic acidigen genomic CC sequences from the present invention. AAK54942 to AAK54950 and AAM82169 CC represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                    RESULT 12
AAK83469/c
ID AAK83469 standard; DNA; 16161 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
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31-JAN-2000;
04-FEB-2000;
24-FEB-2000;
02-MAR-2000;
16-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JAN-2001; 2001US-0259678.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 16106 BP; 3275 A; 4801 C; 4361 G; 3669 T; 0 other;
                                                                                                                                                                                                                                                                                         07-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                               1794 ATCCCAGCACTTTGGGAGGCCGAGGTGGGCGGATCACGAGATCAGG 1749
                                                                                                                                                                                                                cytostatic; gene therapy; vaccine; metastasis; ds.
                                                                                                                                                                                                                                Human; immune; haematopoietic; immune/haematopoietic antigen; cancer;
                                                                                                                                                                                                                                                         Human immune/haematopoietic antigen genomic sequence SEQ ID NO:38281
                                                                                          17-JAN-2001; 2001WO-US01354.
                                                                                                                        09-AUG-2001.
                                                                                                                                                    WO200157182-A2
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60; Conserv
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; 2000US-0179065.
; 2000US-0180628.
; 2000US-0184664.
; 2000US-0186350.
; 2000US-0189874.
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Pred. No. 17;
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    07-JUN-2000;
28-JUN-2000;
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19-MAY-2000;
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2000US - 0232401.

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17-NOV-2000;
17-NOV-2000;
                                                Nucleic acids encoding useful for preventing, metastasis -
                                                                                    WPI; 2001-483426/52.
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17-NOV-2000;
17-NOV-2000;
                                                                                                                          (HUMA-) HUMAN GENOME SCI INC
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20-OCT-2000;
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20-OCT-2000;
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2000US-0249245.
2000US-0249264.
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                                                    human immune/hematopoietic antigen diagnosing and/or treating cancers
                                                                                                       Ruben SM;
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AAK54951 to AAK64702 encode the human samino acid sequences given in AAM82170

immune/haematopoietic antigen (I) to AAM91921. (I) have cytostatic

Claim 1; Page 38-40; 86pp; French

Disclosure;

SEQ ID NO 38281; 3071pp + Sequence Listing; English.

polypeptides and

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AAT94535
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Best Local
                                   Transformation of plants to reduce or increase lignin content - using DNA encoding alfalfa or maize cinnamoyl CoA reductase or corresponding anti-sense mRNA, e.g. to improve digestibility of
                                                                                                                   WPI; 1997-226225/20.
                                                                                                                                                                                                                             03-OCT-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic actived cells. AAK64703 to AAK87694 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK34942 to AAK54950 and AAM82169
                           fodder crops
                                                                                                     P-PSDB;
                                                                                                                                                  Beckert M,
                                                                                                                                                                                                                                                         03-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                 Key
                                                                                                                                                                                                                                                                                                                      WO9712982-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-FEB-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAT94535 standard; cDNA to mRNA; 1556 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1856 TITCAAGAGTTCCAAATTTGAGTATAAAATTACGGCCAGGCGCGGTGGCTCATGCCTGTA 1797
                                                                                                                                                                             (CNRS ) CENT NAT RECH
                                                                                                                                                                                                                                                                                       10-APR-1997.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     represent sequences used in the exemplification of the present invention
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                                                                                                     AAW36041.
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195..1310
/*tag= a
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56.6%;
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AGRONOMIQUE.
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Pred. No. 17;
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                                                                                                                                                Grima-Pettenati J;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-JAN-2000;
15-SEP-2000;
06-NOV-2000;
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                                                                                                                                                                                                                                                                               Yeung
Liu C,
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Novel fetal proteins useful associated with dysfunction
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                                                                                                                                            P-PSDB; AAM06802
                                                                                                                                                                                                                                                                                                                                                                                                              (HYSE-) HYSEQ INC
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                                               New polynucleotide encoding plant apoptosis inducing factor for engineering male sterility, altering plant architecture, manipulating stress response, and influencing growth of cells and tissues in cultus
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Search completed: October 10, 2002, 15:16:17 Job time: 122 secs
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                                                                                                   1104 TCGCTGTCGTGGCAGTTCTACGGCGACAACGCCGGGGAAGCCGTGCA 1150
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                                                                                                                                                                                                                                          295 GGGGGCTCGGTAATGATTGGCCAGGGCGCATCACTGCGAACCTGTCAATCACGGGTCCTC 354
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Sequence 4, Appli	Sequence 3, Appli	Sequence 11, Appl	Sequence 1, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 13, Appl	Sequence 13, Appl	•	Sequence 13, Appl	Sequence 2, Appli	Seguence 1, Appli	Sequence 639, App	Sequence 502, App	Sequence 16, Appl	Sequence 1, Appli

ALIGNMENTS

## TELEX: 910 277299 INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS: GENERAL INFORMATION: FILING DATE: 20-MAY-1994 ATTORNEY/AGENT INFORMATION: NAME: OSMBA, Richard A REGISTRATION NUMBER: 36.627 REFERENCE/DOCKET NUMBER: A-59 TELECOMMUNICATION INFORMATION TELEPHONE: (415) 781-1989 APPLICANT: Peterson, Michael G APPLICANT: Henkel, Thomas TITLE OF INVENTION: EPSTEIN-BARR VIRUS TRANSCRIPTION FACTOR TITLE OF INVENTION: BINDING ASSAY SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/704,398 COMPUTER READABLE FORM: NUMBER OF SEQUENCES: 1 CORRESPONDENCE ADDRESS: PRIOR APPLICATION DATA: MEDIUM TYPE: Flor COMPUTER: IBM PC OPERATING SYSTEM: CLASSIFICATION: ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT STREET: 4 Embarcadero Center, Suite 3400 APPLICATION NUMBER: US/08/246,977 San Francisco : California 94111-4187 nucleic acid Application US/08704398 E: Floppy disk IBM PC compatible SYSTEM: PC-DOS/MS\_DOS 1..1500 linear CDNA doubte 398-3249 A-59233/RAO

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DB 1;

Length 1500;

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Matches 422; Conser
                                             PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/246

FILING DATE: 20 MAY-1994

ATTORNEY/AGENT INFORMATION:

NAME: OSMAN, Richard A

REGISTRATION NUMBER: 36,627

REFERENCE/DOCKET NUMBER: FP-5

TELEPHONE: (415) 781-1989

TELEPHONE: (415) 398-3249
              INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: EPSTEIN-BARR VIRUS TRANSCRIPTION FACTOR TITLE OF INVENTION: BINDING ASSAY
                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA
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                  TELEFAX: (*17,7299 mer.ex; 910 277299
                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                    CITY: San Francisco
STATE: Califer
                                                                                                                                                                                                                      CLASSIFICATION:
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                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                         ZIP: 94111-4187
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CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                       E: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT 4 Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TULARIK, INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                   FP-59233-PC/RAO
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RESULT 3
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                                                                                                                                                                                                                                              Sequence 7, Application US/08896164
Patent No. 6218521
GENERAL INFORMATION:
APPLICANT: OBATA, Yuichi
TITLE OF INVENTION: ISOLATED NUCLEIC ACID MOLECULES ASSOCIATED
TITLE OF INVENTION: MITH GASTRIC CANCER AND METHODS FOR
TITLE OF INVENTION: DIAGNOSING AND TREATING GASTRIC CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
-- rocal Similarity
         COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPETFECT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/89
FILING DATE: July 17, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                            STREET: 800 ....
CITY: New York City
STATE: New York
                                                                                                                 COMPUTER READABLE FORM:
                                                                                                                                                                                                                   NUMBER OF SEQUENCES: E
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CLASSIFICATION:
                                                                                                 MEDIUM TYPE:
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STRANDEDNESS: double
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                                                                                                                                                                                     E: Felfe & Lynch
805 Third Avenue
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                                                                                                 Diskette, 3.50 inch, 1.44mb
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100.0%; Pred. No. 4.9e-124;
tive 0; Mismatches 0;
                          US/08/896,164
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US-08-896-164-1
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08896164 Patent No. 6218521
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: OBATA, Yuichi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 666 base pairs
                                                                                                                                                             STREET: 805 Third Avenue CITY: New York City STATE: New York COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: NO. 6218521man D. Han
REGISTRATION NUMBER: 30,946
REFERENCE/DOCKET NUMBER: LU
                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: ISOLATED NUCLEIC ACID MOLECULES ASSOCIATED TITLE OF INVENTION: WITH GASTRIC CANCER AND METHODS FOR TITLE OF INVENTION: DIAGNOSING AND TREATING GASTRIC CANCER
                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                       SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  211 TGGATGGAAGAAAAAAAAGAACGAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCA 270
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                                                                            COMPUTER: IBM PS/2
OPERATING SYSTEM: F
APPLICATION NUMBER: US/08/896,164 FILING DATE: July 17, 1997
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                                                                                                                 Diskette, 3.50 inch, 1.44mb
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98.9%;
                                                                              PC-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: DORNER, F.
APPLICANT: SCHELFLINGER, F.
APPLICANT: SCHELFLINGER, F.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
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ATTORNEY/AGENT INFORMATION:
NAME: NO. 6218521man D. Hanso
REGISTRATION NUMBER: 30,946
REFERENCE/DOCKET NUMBER: LUD
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (212) 838-38 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 707 base pairs
TYPE: nucleic acid
                   ZIF: 22313-0299

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                132 GCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  492 CTTCATTTT 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        192 TTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAA 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              377 CTTCATGTT 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        372 ACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAACTTGGA 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               252 GTCATATGGAAATGAAAAAGGTTTTTTTGCCCACCTCCTTGTGTATATCTTATGGGCAG 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17 GACAGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAA 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: do TOPOLOGY: linear
                                                                                                                                   COUNTRY: USA
ZIP: 22313-0299
                                                                                                                                                                                            CITY: Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77 TTATTTAAAAGAGCGAGGGGATCAAACAGTNCTTATTCTTCATGCAAAAGTTGCACAGAA 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAAAAATGCAGCAGCTANACTTGGA 316
                                                                                                                                                                               ٧A
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      US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hanson
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FILING DATE:

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                                                     SOFTWARE:
SEQ ID NO 3
                                                                                                                                                                                                                                                                                      sequence 3, Application US/08213419B Patent No. 6333406
                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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                                                                                                            APPLICANT: Inselburg, J. et al.
TITLE OF INVENTION: GENE ENCODING PROTEIN ANTIGENS OF PLASMODIUM FALCIPARUM
TITLE OF INVENTION: AND USES THEREFOR
FILE REFERENCE: JII-002CNCP
CURRENT APPLICATION NUMBER: US/08/213,419B
CURRENT FILING DATE: 1994-03-14
PRIOR APPLICATION NUMBER: US 07/870,506
PRIOR FILING DATE: 1992-04-17
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FILING DATE: 26-AUG-1991
ATTORNEY-AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 30472/114 IMPERENCE/DOCKET NUMBER: 30472/114 IMPELEFONMUNICATION: 1703)836-9300
TELLEFONMUNICATION: (703)836-9300
TELLEFAX: (703)838-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 7218 harm
                                                                                            NUMBER OF SEQ ID NOS:
TYPE: DNA
ORGANISM: Plasmodium falciparum
                                     ENGTH: 6124
                                                                                                                                                                                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                               440 ACTATTGCACAGCCAAAACATTGTATATCTGACTCAGACAAGCGAAAG 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            320 AGAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCAACCGTGTG 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                260 GAAATGAAAAAAGGTTTTTTTGCCCCACCTCCTTGTGTATATCTTATGGGCAGCGGATGGA 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200 AAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAAGTCATATG 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140 AATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATTTAA 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.0%; Score 45.2; DB 1; Length 7218; Local Similarity 2.3%; Pred. No. 0.00028; les 8; Conservative 202.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 7218 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                           PatentIn Ver. 2.0
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RESULT 8
US-09-511-477-38
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US-09-302-812-38
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/302,812B
CURRENT FILING DATE: 1999-04-30
EARLIER APPLICATION NUMBER: 60/83,768
EARLIER FILING DATE: 1998-05-01
NUMBER OF SEQ ID NOS: 38
SEQ ID NO 38
LENGTH: 29793
                                                                             GENERAL INFORMATION:
                                                                                                                   Sequence 38, Application US/09511477 Patent No. 6337202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 53.7
Matches 68; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
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APPLICANT: JACOBSON, Elaine L.
APPLICANT: AM, Jean-Christophe
APPLICANT: LIN, Winston
TITLE OF INVENTION: GENES ENCODING SEVERAL POLY(ADP-RIBOSE) GLYCOHYDROLASE (PARG)
TITLE OF INVENTION: THE PROTEINS AND FRAGMENTS THEREOF, AND ANTIBODIES IMMUNOREACT
TITLE OF INVENTION: THEREWITH
TITLE OF INVENTION: THEREWITH
APPLICANT:
                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                  14672 CTGCATAAAAATCCCTTCTTTTTCACTAAT 14702
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Caenorhabaditis elegans
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LOCATION: (3850)..(5835)
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LOCATION: (2407)..(2439)
NAME/KEY: CDS
LOCATION: (2598)..(3404)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 296 TATATCTTATGGGCAGCGGATGGAAGAAAAAAAAAGAACAAAIGGAACGCGATGGTTGTT 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                          356 CTGAACAAGAGTCTCAACCGTGTGCATTTAT 386
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (3580)..(3720)
JACOBSON,
                                      JACOBSON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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Myron K.
Elaine L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.4%; Score 31.8;
59.3%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 36, Application US/08503226B Patent No. 5871945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/511,477
CURRENT FILING DATE: 2000-02-23
PRIOR APPLICATION NUMBER: 09/302,812
PRIOR FILING DATE: 1999-04-30
NUMBER OF SEQ ID NOS: 20
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TITLE OF INVENTION:
TITLE OF INVENTION:
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                                                              INFORMATION FOR SEQ ID NO: 36:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ID NO 38
LENGTH: 29793
                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
  SEQUENCE CHARACTERISTICS:
LENGTH: 519 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                FILING DATE: 15-MAR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 0
FILING DATE: 15-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Lockerbie, Robert Owen, et al.
TITLE OF INVENTION: Calcineurin Inhibitory Compounds and
TITLE OF INVENTION: Anchoring Protein
                                                                                                         TELEPHONE: 312-474-6300
                                                                                                                                                                                                                  FILING DATE: 23-NOV-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    356 CTGAACAAGAGTCTCAACCGTGTGCATTTAT 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     296 TATATCTTATGGGCAGCGGATGGAAGAAAAAAAAGAACAAATGGAACGCGATGGTTGTT 355
                                                              TELEPHONE: 312-4740448
                                                                                                                                                                    NAME: Williams Jr., Joseph A. REGISTRATION NUMBER: 38,659
                                                                                                                                                                                                                                     APPLICATION NUMBER: US 0: FILING DATE: 23-NOV-1994
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Local Similarity 59.3%;
                                                                                                                                                   REFERENCE/DOCKET NUMBER: 27866/32861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                        436
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US-08-721-458B-36
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                                                                                                                             TELEFAX: 312-4740448
INFORMATION FOR SEQ ID NO:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
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                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 15-MAR-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                     TELEPHONE: 312-474-6300
                                                                                                                                                                                                                                                         FILING DATE: 17-JUL-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                               FILING DATE: 23-NOV-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
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                                                   STRANDEDNESS:
                                                                          TYPE:
                                                                                                                                                                                                      NAME: Williams Jr., Joseph A. REGISTRATION NUMBER: 38,659
REFERENCE/DOCKET NUMBER: 2786
                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 08/503,226
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
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                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
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                                                                                        LENGTH:
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                                                                        nucleic acid
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                                                                                        519 base pairs
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                                                                                                                                                  312-4740448
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SYSTEM: PC-DOS/MS-DOS
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                                                     single
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Query Match

6.3%; Score 31.6; DB 3;

Length 519;

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RESULT 11
US-08-03-226B-35/c
US-08-03-226B-35/c
; Sequence 35, Application US/08503226B
; Patent No. 5871945
; Patent No. 5871945
; GENERAL INFORMATION:
                                                                                                                                                                                                                            US-08-503-226B-35
                                                                                                                                                                                                                                                                                                                                                                                   APPLICATE: 23-NOV-15.
FILING DATE: 23-NOV-15.
ATTOREEY/AGENT INFORMATION:
NAME: Williams Jr., Joseph A.
REGISTRATION NUMBER: 38,659
REFERENCE/DOCKET NUMBER: 27866/
TELECOMMUNICATION INFORMATION:
"FURPHONE: 312-474-6300
                                                                                                                                             Matches
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 541 base pairs
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APPLICATION NUMBER: US 08
FILING DATE: 15-MAR-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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188 GAAATTATTAAAAGAGCGAGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCAC 247
                                                        NUMBER OF SEQUENCES:
                                                                                                 128 CATCGCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGC 187
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                                                                                                                                                                 ocal Similarity
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VENTION: Calcineurin Inhibitory Compounds and
                                                                                                                                             Conservative
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                                                                                                                                          0; Mismatches
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                                                                                                                                                             Score 31.6; DB 2; Length 541; Pred. No. 1.4;
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US-08-721-458B-35/c
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Best Local :
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 312-4740448
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Lockerbie, Robert Owen, et al.
TITLE OF INVENTION: Calcineurin Inhibitory Compounds
TITLE OF INVENTION: and Anchoring Protein
NUMBER OF SEQUENCES: 74
                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 08/503,226 FILING DATE: 17-JUL-1995 ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: U
FILING DATE: 15-MAR-J
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TELECOMMUNICATION INFORMATION:
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                                                                                                    342 AAGTTGTTTATGTGTCACTGTGACAGCTCCCACTGTGGTCTCTTTTGGCAAACCTTTCAA 283
                                                                                                                                          188 GAAATTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCAC 247
                                                                                                                                                                                   128 CATCGCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGC 187
                    282 GGAATTCTCTAGCCACCGACAGAAAGTCGGTCTGTCAACCTGCATG 237
                                                           248 AGAAGTCATATGGAAATGAAAAAAGGTTTTTTTGCCCCACCTCCTTG 293
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                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: sing
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Chicago
STATE: Illinois
                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Williams Jr., Joseph A. REGISTRATION NUMBER: 38,659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE:
COMPUTER: II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                 82;
                                                                                                                                                                                                                                                                 Similarity 49.4
82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60606
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  541 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Marshall, O'Toole, Gerstein, Murray & Borun
233 South Wacker Drive, 6300 Sears Tower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    312-474-6300
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                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                              6.3%; Score 31.6; DB 3; Length 541;
49.4%; Pred. No. 1.4;
ative 0; Mismatches 84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 08/344,227
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US 08/404,731
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1896
TELEPAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO: 32:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 05/827710
FILING DATE: 07-FEB-1986
PRIOR APPLICATION DATA: 07-FEB-1986
APPLICATION NUMBER: 06/783910
FILING DATE: 03-OCT-1985
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/215466
FILING DATE: 05-7UL-1988
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/958414
FILING DATE: 08-OCT-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Anthony J. Mason
APPLICANT: Peter H. Seeburg
TITLE OF INVENTION: Nucleic Acid Encoding the Alpha or Beta Chains of Inhibin and
NUMBER OF SEQUENCES: 44
                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 3588 bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:

PRIOR APPLICATION NUMBER: 06/827710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
07/744207
                                                                                                                            2409 GGCCCAAGAAATAGCAAAAAAAAAAAAAAAAAAGAGAACCACCGTGGAGGCCCGTAGCCAGAG 2468
                                            2469 CCGGTCCCTTTTAACCCAAGTAGGGAAGGGGAATGAGATCTAAGAAGTGAATTTCTTGACA 2528
  427 TTGGAAGGAAAGAA 440
                                                                                367 TCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAAC 426
                                                                                                                                                                    307 GGCAGCGGATGGAAGAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAG 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 12-AU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/0 FILING DATE: 16-FEB-1994
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                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: singl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 28,616
REFERENCE/DOCKET NUMBER: 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Hasak, Janet E. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32, Application US/08197792
5. 5525488
                                                                                                                                                                                                                                   6.3%;
Similarity 52.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94080
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                                                                                                                                                                                                                Conservative
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 Mismatches

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         Matches
                              Query Match
Best Local (
                                                                                                                                                                                       TELEFAX: 415/952-9881
TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 06/906729
FILING DATE: 31-DEC-1986
PRIOR APPLICATION NUMBER: 06/827710
FILING DATE: 07-FEB-1986
PRIOR APPLICATION NUMBER: 06/783910
APPLICATION NUMBER: 06/783910
FILING DATE: 03-OCT-1985
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2529 GTCGCAGGCCAGAA 2542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 44
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 08-OCT-PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/19
FILING DATE: 17-FEB-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: patin (Genentech)
CURRENT APPLICATION NATA:
APPLICATION NUMBER: US/08/45
FILING DATE: 02-JUN-1995
CLASSIFICATION: 435
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Anthony J. Mason
APPLICANT: Peter H. Seeburg
TITLE OF INVENTION: Nucleic Acid Encoding the Alpha or
TITLE OF INVENTION: Beta Chains of Inhibin and Method for Synthesizing Polypept
TITLE OF INVENTION: Using such Nucleic Acid
                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Hasak, Janet E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 05-JUL-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 12-AUG-
PRIOR APPLICATION DATA:
6.3%;
Local Similarity 52.2%;
les 70; Conservation
                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER:
                                                                                                                                                                  LENGTH:
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                                                                                                             IOPOLOGY:
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                                                                                                                                                                       3588 bases
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                                                                                                             linear
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12-AUG-1991
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                                                                                                                                                                                                                                                                                                                                28,616
         Score 31.6; DB 1; Length 3588; Pred. No. 3.9; 0; Mismatches 64; Indels 0.
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307 GGCAGCGGATGGAAGAAAAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAG 366

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PATENT NO. 5716810
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Peter H. Seeburg
TITLE OF INVENTION: Nucleic Acid Encoding the Alpha or
TITLE OF INVENTION: Beta Chains of Inhibin and Method for Synthesizing Polypeptide
TITLE OF INVENTION: Using such Nucleic Acid
NUMBER OF SEQUENCES: 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/197792
FILING DATE: 17-FEB-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/958414
FILING DATE: 08-CCT-1992
PRIOR APPLICATION NUMBER: 07/744207
APPLICATION NUMBER: 07/744207
FILING DATE: 12-AUG-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/215466
FILING DATE: 05-UUL-1988
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
                                                             TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-1896
TELEFAX: 415/952-981
TELEFX: 910/371-7168
INFORMATION FOR SEQ ID NO: 32:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
PRIOR APPLICATION UNMBER: 06/827710
APPLICATION NUMBER: 07-FEB-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: patin (Genentech) CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/459,21 FILLING DATE: 02-UN-1995
                                                                                                                                                                                                   APPLICATION NUMBER: 06/7839
FILING DATE: 03-OCT-1985
ATTORNEY/AGENT INFORMATION:
NAME: Hasak, Janet E.
REGISTRATION NUMBER: 28,616
REFERENCE/DOCKET NUMBER: 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 94080
COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 in.
COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          367 TCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAAC 426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2529 GTCGCAGGCCAGAA 2542
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     STRANDEDNESS:
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                                              LENGTH:
                    nucleic acid
                                                3588 bases
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31-DEC-1986
single
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Search completed: October 10, 2002, 18:15:08 Job time: 58.7333 secs
                                                                     В
                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                      Matches
                                                                     2529 GTCGCAGGCCAGAA 2542
                                                                                                                                           2469 CCGGTCCCTTTTAACCCAAGTAGGGAAGGGGAATGAGAACTAAGAAGTGAATTTCTTGACA 2528
                                                                                                                                                                                                               427 TTGGAAGGAAAGAA 440
                                                                                                                                                                                                                                               307 GGCAGCGGATGGAAGAAAAAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAG 366
                                                                                                                                                                            367 TCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAAC 426
                                                                                                                                                                                                                                                                                    70; Conservative
                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                     6.38;
52.28;
                                                                                                                                                                                                                                                                                    Score 31.6; DI Pred. No. 3.9; 0; Mismatches
                                                                                                                                                                                                                                                                                                                     DB 1; Length 3588;
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Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
          478.8
477.2
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1: enq.
2: enf.
3: enf.
4: enf.
6: enf.
7: enf.
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500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      October 10, 2002, 12:39:37; Search time 695.733 Seconds (without alignments) 9699.805 Million cell updates/sec
                                                                                                                                                                                                                Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13736207 segs, 6748477542 residues
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          GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
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    BE257318 601108955
BE252985 601108755
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BE269349 601188864
BI093196 602853157
BE518818 601318493
BE269313 601188204
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BI597820 603243010
BI60A083 603244010
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ALIGO2969 DKF250864
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                                                                                                                                          Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cyapbs-remail.nih.gov
Tissue Procurement: ATCC
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM144 row: m column: 14
High quality sequence stop: 595.
1. 595
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BE257118
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// Ob_xref "taxon: 9606"
// Obope "Itb "NIH_MGC_16"
// Clone Itb "NIH_MGC_16"
// Lab_host "DHIDM (phage resistant)"
// Lab_host "Organ: eye; Vector: p0TB); Site_1: Xho; Site_2: Mote "Organ: eye; Vector: p0TB); Site_1: Xho; Site_2: Cond organ: eye; Vector: p0TB); Site_1: Xho; Site_2: Cond organ: eye; Vector: p0TB); Site_1: Xho; Site_2: Adaptor: GGCACGAG(G) Library constructed by Ling Hong in the laboratory of Gerald M. Rubbn (University of California, Berkeley) using ZAP-cDNA synthesis kit
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BF791729 601586480
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BIS37805 603089718
BG828970 602752978
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1 (bases 1 to 662)

NIH-MGC http://mgc.ncl.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                 CDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.N.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov Plate: LCCM144 row: m column: 13

High quality sequence stop: 541.

Location/Qualitiers
                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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Note: this is a NIH_MGC Library."
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Pred. No. 1.6e-108;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139 AARTTGGTGACGGCCTCCACCTAAAGGACTTACTAGGGAACTATGGGAAGTATTATTA 198 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 11111 | 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          116 ATGGACCACACGGAGGGCTCGCCGCGGGAGGAGCCGCCTGCGCATGCTCCATCGCCTGGG 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79 ATGGACCACACGGAGGGCTTGCCCGCGGGGGGGGGCCGCCTGCGCATGCTCCATCGCCTGGG 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56 CAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAAACCCGGATAACCGGAGCGCTCCCC 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19 CAGTCTCCACGTACGTCCCTCAAAGCGGGTCCTAAAACCGGGATAACCGGGAGCGCTCCCC 78
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Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia, Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 716) NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                         mRNA sequence.
BE269949
                                                                                                                                                                                                                                                                                                                                                               BE269949 716 bp mRNA linear EST 13-JUL-2000 601184864F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3542655 5',
                                                                                                                                                                                                                                                                       BE269949.1 GI:9143578
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/clone_lib="NIH_MGC_16"
/tlsne_lib="NIH_MGC_16"
/tlsne_type="retinoblastoma"
/lab_host="DH10B (phage=resistant)"
/l
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/db_xref="taxon:9606"
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RESULT 4	20 July 11 July	499 TT		OV 439 AACTATTGCACAGCCAAAACATTGTATATATCTGACTCAGACAAGCGAAAGCACTTCATT 498	GCATITATGGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAACTTGGAAAGGAAAG	379 GCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAACTTGGAAGGAA	Qy 319 AAGAAAAAAAGAACAAATGGAACGGGATGGTTGTTCTGAACAAGAGTCTCAACCGTGT 3/6	010	Qy 259 GGAAATGAAAAAAGGTTTTTTTGCCCACCTCCTTGTGTATATCTTATGGGCAGCGGATGG 318	Db 266 AAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAAGTCATAT 325	Qy 199 AAAGAGCGAGGGGATCAAAAGTTATTCTTCATGCAAAAGTTGCACAGAAGTCATAT 258	Db 206 AAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATTTA 265	Oy 139 AAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATTTA 198	146	Qy 79 ATGGACCACACGGAGGGCTTGCCCGGGAGGAGGCGCCTGCGCATGCTCCATCGCCTGGG 138	9y 19 CAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAACCCGGATAACCGGAGGGCTCCCC 78	Query Match 95.1%; Score 475.6; DB 10; Length 716; Best Local Similarity 99.2%; Pred. No. 1e-107; Matches 478; Conservative 0; Mismatches 4; Indels 0; Gaps 0;	ORIGIN  ATR A 125 C 133 G 120 C	2	cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average	<pre>/note="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2:</pre>	/clone_lib="NIH_MGC_8"		FEATURES Location/Qualifiers source 1716		Clone distribution: MC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov	CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)	Email:	TITLE National Institutes of Health, Mammalian Gene Collection (MGC) JORNAL Unpublished (1999) COMMENT Contact: Robert Strausberg, Ph.D.
	D	Db 378		Db 318			Oy 199		рь 138 Qy 139	0у 79	Db 78	0у 19	Matches	Query Ma	ORIGIN	Base Colle			FEATURES sourc				COMMENT	TITLE	REFERENCE	ORGANISM	VERSION KEYWORDS SOURCE	ACCESSION	BIO93196 LOCUS DEFINITION

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BI093196
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 785)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                      95.0%; Score 475.2; DB 10; Length 785; 11 Similarity 99.2%; Pred No. 1.3e-107; 477; Conservative 0; Mismatches 4; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B1093196 785 bp mRNA linear EST 20-JUN-2001 602856157F1 NIH_MGC_10 Homo sapiens CDNA clone IMAGE:4997295 5', BRNA sequence.
B1093196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999 Contact: Robert S:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BI093196.1 GI:14511526
                                                                                                                                                                                                                                                                                                                                                                                                   243 a
                                                                                                                                                                                                                                                                                                                                                                                                /note-"Organ: cervix; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally. Primer: Oligo dr. Average insert size 1.5 kb. Library prepared by Life Technologies: "

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199 AAACAGCGAGGGATGAAACAGTACTTATTCTTCATGCAAAACGTGCACGAAGGTCATAT 258
267 AAACAGCGAGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGGAAGTCATAT 326
                                                                                                                                              139 AAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATTTA 198
                                                                                                                                                                                                                                                                                            147 ATGACCACACGGAGGCTCGCCCGCGGAGGAGCCGCCTGCGCATCCTCCATCGCCTGGG 206
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                                                                                                                                                                                                                                                                                                                                                                                                                                               87 CAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAAACCCGGATAACCGGAGCGCTCCCC 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19 CAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAACCCGGATAACCGGAGCGCTCCCC 78
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Tissue Procuzement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM32B row: f column: 16
High quality sequence stop: 656.
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BE513818.1 GI:9721030
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/lab_bost="Dirkitt lymphoma"
/lab_bost="Di
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/db_xref="taxon:9606"
/clone="IMAGE:3634191"
/clone_lib="NIH_MGC_8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94.9%; Score 474.6; DB 10; Length 690;
99.2%; Pred. No. 1.8e-107;
tive 0; Mismatches 4; Indels 0;
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327 GGAAATGAAAAAAGGTTTTTTTGCCCACCTCCTTGTGTAFATCTTATGGGCACCGATGG 386
19 CAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAACCGGGATAACCGGAGCGCTCCCC 78
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Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM233 row: J column: 24
High quality sequence stop: 583.
Location/Qualifiers
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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658 bp mRNA linear EST 13-JUL-2000 601184493Fl NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3542135 5',
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Labbratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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National Institutes of Health, Mammalian Gene Collection (MGC)
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/db_xref="taxon:9606"
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/clone=lib="NIH_MGC_9"
/clone=lib="NIH_MGC_9"
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/tissue_type="Burkitt lymphoma"
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146 ATGGACCACACGGAGGGCTCGCCGCGGAGGAGCCGCCTGCGCATGCTCCATCGCCTGGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      206 AAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  139 AAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATTTA 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               506 GAACTATTGCACAGCCAAA 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              438 GAACTATTGCACAGCCAAA 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 446 GCATTTATTGGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAACTTGGACGGAAA 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                326 GGAAATGAAAAAGGTTTTTTTGCCCACCTCCTTGTGTATATCTTATGGGCAGCGGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    266 AAAGAGCGAGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAAGTCATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86 CAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAACCCGGATAACCGGAGCGCTCCCC 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79 ATGGACCACACGGAGGCTTGCCCGCGGAGGAGCCGCCTGCGCATGCTCCATCGCCTGGG 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 CAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAACCCGGATAACCGGAGCGCTCCCC 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCAACCGTGT 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAAATGAAAAAAGGTTTTTTTGCCCCACCTCCTTGTGTATATCTTATGGGCAGCGGATGG 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ANAGAGCGAGGGGATCANACAGTACTTATTCTTCATGCANAAGTTGCACAGAAGTCATAT 258
                                                                                                                                                                                                                                                                                                                                                                                                  Sus scrofe
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
1 (bases 1 to 473)
1 (bases 1, Freking, B.A., Rohrer, G.A., Smith, T.P.L., Casas, E. Fahrenkrug, S.C., Freking, B.A., Rohrer, G.A., Bennett, G.A., Laegreid, W.W.
                                                                                      CONTEACT: SMITH TPL
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 436
Fax: 402 762 436
Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                   Stone, R.T., Heaton, M.P., Grosse, W.M., Bennett, G.A., Laegreid, W.W. and Keele, J.W.
Design and use of two pooled tissue normalized cDNA libraries for EST discovery in swine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG609533 473 bp mRNA linear 323418 MARC lPIG Sus scrofa cDNA 5', mRNA sequence. BG609533
                       Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscorr
                                                                                                                                                                                                                                                                                                Unpublished (2000)
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and -minmatch 12 options.
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Pred. No. 7.3e-95;
Pred. No. 7.3e-95;
Indels 1; Gaps
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                                   -minscore 18
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REFERENCE
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Local Similarity 93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ATCCCCTCCGGTTTTCCTCAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAACCCGG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAAGAGTCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAGAGTCTCAACCATGTGCATTTATTGGAATAGGAAATAGTGACCAGGAAATGCAACAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTATGGGCAGCGGATGGAAGAAAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTGCACAGAAGTCATATGGGAATG-AAAAAGGTTTTTTTTGCCCCTCCTTGTGTGTAT 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTATGCGAAATTATTTAAAAGAGCGAGGAGATCAAACAGTACTTATTCTTCATGCAAAA 239
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGCTCCATCG-CTTGGAAAATTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAA 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGCTCCATCGCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAACCGGAGCACTCCCCATGGACCAGACGGAGGGCTCGCCGGGGAGGAGGTGCCTGCG 120
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 575)

NIH-MGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
Email: Capabs remail.nih.gov
Tissue Procurement: Mixlos Palkovits, M.D., Ph.D.
Tissue Procurement: Mixlos Palkovits, M.D., Ph.D.
                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                     BI597820.1 GI:15490759
                                                                                                                                                                                                                                                                                             mRNA sequence.
BI597820
                                                                                                                                                                                                                                                                                                                              BI597820 575 bp mRNA linear EST 07-SEP-2001 603245301F1 NIH_MGC_96 Homo sapiens cDNA clone IMAGE:5287561 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq primer: ATTTAGGTGACACTATAG.
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Plate: 98 row: L column: 1
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105 c 116 g .110 t
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/tissue_type="pooled"
/lab_host="DH10B"
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/db_xref="taxon:9823"
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Pred. No. 7.8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114 GCCTGCGCATGCTCCATCGCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTAC 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          474 CTCAGACAAGCGAAAGCACTTCATTTT 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          354 TTCTGAACAAGAGTCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAAT 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               126 TGCAAAAGTTGCACAGAAGTCATATGGAAATGAAAAAAGGTTTTTTTGCCCACCTCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           174 TAGGGAAGCTATGCGAAATTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCA 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    306 GCAGCAGCTAAACTTGGAAGGAAAGAACTATTGCACAGCCAAAACATTGTATATATCTGA 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   246 TTCTGAACAAGAGTCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 GCCAGCGCATGCTCCATCGCCTGGGAAATTTTGGTGAGCGGCCTCCACCTAAAACGACTTAC 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    384;
                                                                                                                                                                                                                                                                                  603244010F1 NIH_MGC_96 Homo sapiens
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Plate: LLAM11727 row: a column: 02
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                         Homo sapiens
                                                                                                                                                                                      BI604083.1 GI:15497023
                                                                                                                                                                                                                                                        mRNA sequence.
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Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                         414 GCAGCAGCTAAACTTGGAAGGAAAGAACTATTGCACAGCCAAAACATTGTATATATCTGA 473
                                                                                                                          366 CTCAGACAAGCGAAAGCACTTCATGTT 392
                                                                                                                                                             474 CTCAGACAAGCGAAAGCACTTCATTTT 500
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                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
BI600065 748 bp mRNA linear EST 07-SEP-2001 603251452F1 NIH_MGC_96 Homo sapiens cDNA clone IMAGE:5303101 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
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/db_xref="taxon:9606"
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    474 CTCAGACAAGCGAAAGCACTTCATTTT 500
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Email: cgapbs r@mail.nih.gov

Tissue procurement: Miklos Palkovits, M.D., Ph.D.

cDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki

Toshiyuki and Piero Carninci (RIKEN)

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
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Contact: Robert St
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Plate: LLAM11767 row: h column: 14
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/db_xref="taxon:9606"
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99.2%; Pred. No. 1.5e-84;
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294 TGTATATCTTATGGGCAGCGGATGGAAGAAAAAAAAAGAACAAATGGAACGCGATGGTTG 353
                                                  181 TGCAAAAGTTGCACAGAAGTCTTACGGAAATGAAAAACGATTTTTTTGCCCTCCTCCTTG 240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: Cgpbs-r@mail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
image.llnl.gov/image/html/iresources.shtml
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BF226018 463 bp mRNA linear EST 29-DEC-2000 uz47cC1.y1 NCI_CGAP_Mam6 Mus musculus cDNA cLone IMAGE:3672192 5' similar to SW:RBJK_MOUSE B31266 J KAPPA-RECOMBINATION SIGNAL BINDING PROTEIN ; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 341.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF226018.1 GI:11133663
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        house mouse.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: SalI; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Jeffrey Green, M.D., NIH"

94 c 124 g 104 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/clone="TMAGE:3672192"
/clone_lib="NOI_CGAP_MAm6"
/sex="female, virgin"
/tissue_type="infiltrating ductal carcinoma"
/dev_stage="5 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/strain="FVB/N"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 378.2; DB Pred. No. 1.5e-83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 10; Length 463;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43; Indels
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AA171575
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KEYWORDS
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                                                                                                                                                                                                            BASE COUNT
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                                                                                                                            Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421 ATCAGACAAGAGAAGACATGTCATGTT 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       474 CTCAGACAAGCGAAAGCACTTCATTTT 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81 GGACCACACGGAGGGCTTGCCCGCGGAGGAGCCGCCTGCGCATGCTCCATCGCCTGGGAA 140
                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAGCATCTGAACTTGGAAGGGAAGAACTACTGCACAGGCAAAACATTGGACATATTTGG 420
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                                                                                399;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA171575 438 bp mRNA linear EST 23-DEC-199. 
zp23a04.rl Stratagene neuroepithelium (#937231) Homo sapiens CDNA 
clone IMAGE:610254 5' similar to gb:L07872_cds1 J 
KAPPA-RECOMBINATION SIGNAL BINDING PROTEIN (HUMAN);, mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hillier L., Lennon G., Becker, M., Bonaldo, M.F., Chiapelli, B., Chissoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W., Hawkins Chissoe, S., Dietrich, N., Leux, M., Le, N., Mardis, E., Moore, M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, N., Mardis, E., Moore, B., Morris, M., Parsons, J., Frange, C., Rifkin, L., Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Weg, J., Trevaskis, E., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Weg, J., Trevaskis, E., Underwood, K., Wohldmann, P., Waterston, R., Wilson, R. and Marra, M. Generation and analysis of 280,000 human expressed sequence tags genome Res. 6 (9), 807-828 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 438)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -28M13 rev2 from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 322.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Wilson RK
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                                                                                                       Similarity
                                                                                                                                                                                                            137
                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    314 286 1800
314 286 1810
                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="GDB:4625513"
/db_xref="GDB:4625513"
/db_xref="Taxan:9606"
/clone="IMAGE:5610254"
/clone="Ib="Stratagene neuroepithelial cells"
/dev_stage="Neter=2/RA neuroepithelial cells"
/lab_host="SOLR (kanamycln resistant)"
/lab_host="Netor: pBluescript SK'; Site_1: EcoRI; Site_2:
/note="Pvector: pBluescript SK'; Site_1: EcoRI; Site_2:
XhoI; Cloned unidirectionally. Primer: Oligo dT. NY2
cells (Ntera-2/C1.Dl) induced with Retinoic Acid for 24
hours. Average insert size: 1.5 kb; Uni-Zap xR Vector; ~5'
adaptor sequence: 5' GAATTCGGCACAGA 3' -3' adaptor
sequence: 5' CGAGTTTTTTTTTTTTT 3'"
sequence: 5' CTGGAGTTTTTTTTTTTTT 3'"
37 a 83 c 107 g 102 t 9 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            est@watson.wustl.edu
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                                                                                                       74.68;
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                                                                                                    Score 373; DB 9
Pred. No. 3e-82;
                                                                             Mismatches
                                                                                                                            DB 9; Length 438;
                                                                                11; Indels
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                                                                             Gaps
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/organism="Bomo sapiens" /db_xref="taxon:9606" /clone="DKFZp686H1720"  lopfer is the front arch (enced ortium ortium language contine clone se contine in-Chall in-C	LOCUS AL602969 DEFINITION DKFZp686H1720_rl 686 (synonym: hlc3) Homo sapiens cDNA clone DKFZp686H1720_S', mRNA sequence.  ACCESSION AL602969 VERSION AL602969.1 GI:15166475 KEYWORDS SOURCE ORGANISM Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; REFERENCE AUTHORS AUTHORS AUTHORS Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; REFERENCE TITLE TITLE EST (Wambutt, R., Heubner, D., Mewes, H.W., Weil, B. and Wiemann, S.) TOURNAL CONMENT Unpublished (1999) COMMENT MIPS COMMENT MIPS  CONTACT: Wambutt R MIPS  MIP	1 GGACCACACGGAGGGCTCGCCGCNGGAGGAGCCNCNTGCGCATGCTCCATCGCCTGGGAA 60 141 ATTTGGTGAGCGGCCTCACCTAAACGACTTACTAGGAAGCTATGCG-AAATTATTAA 199	
source l/99  /organism="Homo sapiens" /db_xref="taxon:9606" /db_xref="taxon:9606" /db_xref="taxon:9606" /clone='InhaGE:473165" /clone=lib="NHH_MCC_61" /tissue_type="embryonal carcinoma" /clone=lib="NHH_MCC_61" /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: pDNN-LIB (Clontech); Site_1: /note="Organ: testis; vector: pDNN-LIB (Clontech); Site_1: /note="Organ: pDNN-LIB (Clontech); Si		RESULT 15  BG614689  LOCUS  BG614689  LOCUS  DEFINITION  GO2642184F1 NIH_MGC_61 Homo sapiens cDNA clone IMAGE:4773165 5',  MRNA sequence.  ACCESSION  WERSION  KEYWORDS  SOURCE  ORGANISM  Homo sapiens  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  REPERENCE  AUTHORS  NIH-MGC http://mgc.nci.nih.gov/  Mational Institutes of Health, Mammalian Gene Collection (MGC)  UDDublished (1999)	3 4 3 3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7

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Best Local Similarity
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                                                                                                                      398 CTTCATGTT 406
                                                                               492 CTTCATTTT 500
                                                                                                                                                                                   372 ACCGTGTGCATTTATTGGGATAGGAAATGACCAGAAATGCAGCAGAAAGTTGGA 431
278 ACCGTGTGCATTTATTGGGATAGGAAATGACCAGAAATGCAGCAGAAATTGGA 337
                                                                                                                                                                                                                                                              312 CGGATGGAAGAAAAAAAAAAGAGCAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCA 371
                                                                                                                                                                                                                                                                                                       192 TTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAA 251
                                                                                                                                                                                                                                               218 CGGATGGAAGAAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCA 277
                                                                                                                                                                                                                                                                                                                                                                     98 TTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAA 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: this is a NHL_MGC Library."

252 a 146 c 194 g 207 t
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                             500
432.8
422
364.2
362.6
354.4
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1: /SIDS1/gcgdata/hc
2: /SIDS1/gcgdata/ho
3: /SIDS1/gcgdata/ho
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-489-101A-10_COPY_1_500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1736436 seqs, 858457221 residues
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/SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1992.DAT:*
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/SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA1994.DAT:*
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/SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA2001A.DAT:*
/SIDSI/gcgdata/hold-geneseq/geneseqn-embl/NA2001A.DAT:*
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\SIDS1/gcgdata/hold-geneseq-geneseqn-emb1/NA1987_DAT:*
\SIDS1/gcgdata/hold-geneseq/geneseqn-emb1/NA1987_DAT:*
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  AAF22790
AAH42783
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AAF18323
AAX40082
AAX40076
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AAD11117
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                                                                                                             Renal cancer assoc Human small cell l Jk recombinant sig C-promoter binding
                                                                                                                                                                                                                                Description
                                          Lung cancer associ
Gastric cancer ass
Gastric cancer ass
Human prostate can
Nucleotide sequenc
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Human low adenosin	AAF21288		13611	6.8	33.8	<b>4</b> 2 5	
٤	AAS61396		10647	6.8	w	44	Ω
Human HBM gene reg	ABA82620		26928	6.8	34	43	a
	ABL32387	24	18598	6.8	34	42	O
	AAH54742		3769	6.9		41	
	AAH54587		3450	6.9	•	40	o
S. epidermidis gen	AAH54436		3148	6.9	34.4	39	
Human gene express	AAZ16396		1154	6.9	34.4	38	
Human gene regulat	AAS61276		8964	6.9	34.6	37	
Human immune syste	ABL33534		8964	6.9	34.6	36	
Human SHOX (short	AAV35620		32367	7.0	35	ω 5	
Maize starch branc	AAZ35392		8119	7.1	35.6	34	
DNA encoding novel	AAS92571		3662	8.2	41.2	ω ω	
DNA encoding novel	AAS71622		3662	8.2	41.2	32	
DNA encoding novel	AAS71624		276	8.2	41.2	31	C
12	AAF22649		819	9.5	47.4	30	
Human ORFX ORF2583	AAC77028		2370	13.0	65.2	29	
Human transcriptio	ABA83044		1127	13.0	65.2	28	
Human secreted pro	AAC08033		303	13.4	67	27	
Drosophila melanog	ABL06268		5829	22.2	111	26	
Human single nucle	AAH87431	20	262	23.0	115.2	25	
Human single nucle	AAH87430	20	262	23.0	115.2	24	
Human biallelic po	AAX12527	19	251	23.0	115.2	23	
Human biallelic po	AAX12526	19	251	23.0	115.2	22	
Drosophila melanog	ABL06269	23	2932	25.5		21	
Human prostate can	AAF22793	22	741	32.2	160.8	20	
Human lung tumour-	AAD23366	23	538	34.3		19	
tum	AAC79290	21	538	34.3		18	
Human secreted pro	AAC00786	21	229	36.2		17	
Human breast tumou	AAH55536	22	391	42.8		16	ი
Human prostate can	AAF22791	22	815	47.8	238.8	15	
Human prostate can	AAF22792	22	625	56.4		14	
Human prostate can	AAF22795	22	768	56.6		13	
Human prostate can	AAF22796	22	665	62.5		12	
Human colon cancer	AAH33426	22	473	63.9		11	
Breast cancer asso	AAX39641	20	1599	64.2		10	

## ALIGNMENTS

RESULT 1 AAX39671

AAX39671;

AAX39671 standard; DNA; 1580 BP.

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22-JUN-1998;
17-JUL-1997;
10-OCT-1997;
10-OCT-1997;
10-OCT-1997;
 Chen Y,
                                                                                                                                                                             Cancer associated antigen; diagnosis; research; treatment; human; breast cancer; colon cancer; gastric cancer; renal cancer; lung cancer;
                                                                                                                                    WO9904265-A2
                                                                                                                                                     Homo sapiens.
                                                                                                                                                                      prostate cancer;
                                                                                                                                                                                                          Renal cancer associated gene.
                                                                                                                                                                                                                          02-JUL-1999 (first entry)
                  (LUDW-) LUDWIG INST CANCER RES.
                                                                                                15-JUL-1998;
                                                                                                                   28-JAN-1999
Gout I, Gure A, O'Hare M,
                                                    98US-0102322.
97US-0896164.
97US-0061599.
97US-0061765.
                                   97US-0948705.
97GB-0021697.
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 Obata Y,
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RESULT 2
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a method for diagnosing a disorder characterised by expression of a human cancer associated antiqen precursor coded for by a nucleic acid molecule (NAM). The method comprises: (a) contacting a biological sample isolated from a subject with an agent that specifically binds to the NAM, an expression product or a fragment of an expression product complexed with an HLA molecule; and (b) determining the interaction between the agent and the NAM or the expression product as a determination of the disorder. The products and methods can be used in the diagnosis, monitoring, research, or treatment of conditions characterised by the expression of various cancer associated antigen precursors expressed in human breast cancer, renal cancer, colon cancer, gastric cancer, prostate cancer and
             AAD11117 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 67; Page 481-482; 787pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated cancer associated nucleic acids and polypeptides isolated using sera from cancer patients, used to develop products
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1580 BP; 481 A; 352 C; 359 G; 388 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for the diagnosis, monitoring or treatment of cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1999-132448/11.
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                                                                                                                     CAAGAGTCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAG 420
                                                                                                                                                                                                                 AAGCGAAAGCACTTCATTTT 500
                                                                                                AAGCGAAAGCACTTCATTTT 500
                                                                                                                                                                     CAAGAGTCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAG
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Similarity 100.0%;
)0; Conservative 0
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             DNA; 1580
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 500; DB 20;
Pred. No. 2.3e-146;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (LUDW-) LUDWIG INST CANCER RES (SLOK ) SLOAN KETTERING INST CI (CORR ) CORNELL RES FOUND INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-457597/49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stockert E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-JAN-2000; 2000US-0489101.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-JAN-2001; 2001WO-US02015
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                melanoma; cancer;
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121
                                                                                                                                                                                                                                 Toca1
                                                                                                                                                                                                                    500;
                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
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The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a DNA encoding human J-kappa recombination signal binding protein (RBP-1). This small cell lung cancer associated gene is designated as NY-SCLC-8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by isolated nucleic acid comprising an NA Group 3 or 4 molecule.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                melanoma; cancer; colon; breast; head; neck; transitional cal
leimyosarcoma; J-kappa recombination signal binding protein;
synovial sarcoma; cytostatic; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1580 BP; 481 A; 352 C; 359 G; 388 T; 0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human small cell lung cancer associated gene, RBP-1.
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1 ATCCCCTCCGGTTTTCCTCAGTCTCCACGTACGTCCCTCAAAGCGCGCTCCTAAAACCCGG 60
1 ATCCCCTCCGGGTTTTCCTCAGTCTCCACGTACGTCCCTCAAAGCGCGTCCTAAAACCCGG 60
GCTATGCGAAATTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAA 240
                                                                                               GCTATGCGAAATTATTTAAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAA 240
                                                                                                                                                                                              CATGCTCCATCGCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAA 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATAACCGGAGCGCTCCCCATGGACCACACGGAGGGCTTGCCCGCGGAGGAGCCCGCCTGCG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 500; DB 22; ilarity 100.0%; Pred. No. 2.3e-146; Conservative 0; Mismatches ^.
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                                                                                                                                           Matches 458;
                                                                                                                                                                                                                                                                                                                                     JK recombinant signal sequence binding protein - binds specifically on immunoglobulin gene, obtd. by culturing transformant of plasmid, then collecting protein
                                                                                                                                                                                                                                      The sequence is that which encodes Jk recombinant signal sequence (JkRS) binding protein. Using the sequence mass production of the protein is possible by genetic engineering. See also AAQ20596-Q20601.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JkRS; immunoglobulin; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jk recombinant signal sequence binding protein gene.
                                                                                                                                                                                                          Sequence 1581 BP; 460 A; 380 C; 392 G; 349 T; 0 other;
                                                                                                                                                                                                                                                                                                        Claim 2; Fig 6; llpp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1992-029690/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TOYM ) TOYOBO KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-MAR-1990;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAAGAGTCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAG 420
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGCGAAAGCACTTCATTTT 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTAAACTTGGAAGGAAAGAACTATTGCACAGCCAAAACATTGTATATATCTGACTCAGAC
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                 ATAACCGGAGCGCTCCCCATGGACCACACGGAGGGCTTGCCCGCGGGAGGAGCCGCCTGCG 120
                                                                               ATGCCCTCCGGTTTTCCTCAGTCTCCACGTACGTCCCCGAGGGCGCGTCCCCAAAACCCGG 60
                                                                                                                                                            Similarity
                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90JP-0077317.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                         86.68;
                                                                                                                                           Pred. No. 2.7e-125;
0; Mismatches 42; Indels
                                                                                                                                                                        Score 432.8; DB 13;
                                                                                                                                                                          Length 1581;
                                                                                                                                           0;
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   AAT06947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C-promoter binding factor 1; CBF1; transcription factor; TF; EBNA2; Epstein-Barr virus; CBF1-TF transcription complex; viral infection; bacterial infection; fungal infection; metabolic disease; inflammation; genetic disease; cell growth disfunction; regulatory disfunction; neoplasm; hypersensitivity; human; animal; plant; therapy; ds.
This sequence represents the cDNA encoding C-promoter binding factor-1 (CBF1). A partially purified form of the protein encoded by this sequence is used in the method of the invention. The method is used for screening a chemical library for pharmacological agents. The protein is able to
                                                                               Claim 1; Page 22-24; 34pp; English.
                                                                                                           Screening cpds. which disrupt complex formation between C-promoter binding factor and transcription factor - potentially useful for treating diseases involving the expression of a gene modulated by such complex formation
                                                                                                                                                                                             WPI; 1996-020599/02.
P-PSDB; AAR86790.
                                                                                                                                                                                                                                                                                                                                                                                                         W09532307-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C-promoter binding factor 1 coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-JUN-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAT06947 standard; cDNA; 1500 BP
                                                                                                                                                                                                                                                                                                                                          17-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                          (TULA-) TULARIK INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 GTTGCACAGAAGTCATATGGAAATGAAAAAAGGTTTTTTTGCCCACCTCCTTGTGTATAT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 GCTATGCGAAATTATTTAAAAGAACGAGGGGATCAAACAGTGCTCATTCTTCATGCAAAA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 CATGCTCCATCGGCGGGAAGTTTGGTGAGCGGCCTCCACCCAAACGACTCACTAGGGAA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 CATGCTCCATCGCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAA 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 CAAGAGTCTCAACCCTGTGCGTTTATTGGAATAGGAAACAGTGACCAAGAAATGCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361 CAAGAGTCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTAAACTTGGAAGGAAAGAACTATTGCACAGCCAAAACATTGTATATATCTGACTCAGAC 480
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTATGCGAAATTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAA 240
                                                                                                                                                                                                                                            Peterson
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                selectively bind to a transcription factor (TF) (such as Epstein-Barr virus EBNA2), and a test compound. The sample is incubated under conditions that allow the protein and the TF to bind. The presence or absence of binding of CBF1 and TF is then detected. Absence of binding indicates that the test compound disrupts CBF1-TF dependent gene expression. This method is also modified to include a labelled nucleic acid sequence containing the sequence GGGA in the incubation mixture. When the nucleic acid is used, the presence or absence of the binding of the CBF1-TF transcription complex to the nucleic acid sequence is detected. The test compounds identified are potentially useful for treating diseases associated with expression of a gene modulated by a CCBF1-TF transcription complex. These include viral, bacterial or fungal infections, metabolic or genetic diseases and cell growth/regulatory disfunction (such as neoplasms, inflammation or hypersensitivity), in humans animals or plants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 422;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                            Human; lung cancer associated protein; neuroprotective; cytostatic; cardioactive; immunomodulatory; muscular active; vulnerary; gastrointestinal; nephrotropic; antiinfective; gynecological; antibacterial; diagnosis; neural disorder; immune disorder; reproduproliferative disorder; wound healing; infectious disease; ds.
             Homo sapiens
                                                                                                                                                              Lung cancer associated polynucleotide sequence SEQ ID 342.
                                                                                                                                                                                                      14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                   AAF18323 standard; DNA; 5668 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1500 BP; 465 A; 319 C; 346 G; 370 T; 0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ATGGACCACACGGAGGCTTGCCCGCGGAGGAGCCGCCTGCGCATGCTCCATCGCCTGGG 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCAACCGTGT 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAAATGAAAAAAGGTTTTTTTGCCCACCTCCTTGTGTATATCTTATGGGCAGCGGATGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATTTA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATTTA 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84.4%; 5...
100.0%; Pred. No.
170 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
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Matches Query Match

366;

Conservative

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Similarity

72.8%; Score 364.2; 99.2%; Pred. No. 1.7 0,

Mismatches

.7e-103;

DB 21; Length 5668; Indels

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immunomodulatory; muscular active general; vulnerary; gastrointestinal general; nephrotropic; antiinfective; gynecological; or antibacterial activity. The invention also includes antibodies specific for the protein or polynucleotide sequences. The lung cancer associated polynucleotide sequences may be used for detection of lung cancer, chromosome identification, as chromosome markers, and for numerous other disgnostic or research purposes. The proteins may be used to treat disorders such as neural, immune, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal, and proliferative disorders. The proteins may also be used in the treatment of wounds and peptide AAB58549 are used in the course of the invention for the identification and characterisation of the polynucleotide and protein
Sequence 5668 BP; 1647 A; 1028 C; 1113 G; 1879 T; 1 other;
                                                                                                                                                                                                                                                                                                                              Polynucleotide sequences AAF17982 - AAF18424 encode human lung cancer associated proteins represented in AAB58106 - AAB58548. Lung cancer associated proteins and polynucleotide sequences, their agonists, and anitagonists may have neuroprotective; cytostatic; cardioactive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lung cancer associated gene sequences, referred to as lung cancer antigens, useful for treatment, prevention, and diagnosis of disorders such as lung cancer -
                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 798-800; 1425pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HUMA-) HUMAN GENOME SCI INC
(ROSE/) ROSEN C A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-MAR-2000; 2000WO-US05918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-MAR-1999;
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                                                                                                                                                                                                                                                                                                                                   252 GTCATATGGAAATGAAAAAAGGTTTTTTTGCCCACCTTCTTGTGTATATCTTATGGGCAG 311
                                               483 AGGAAAGAACTATTGCACAGCCAAAACATTGTATATATCTGACTCAGACAAGCGAAAGCA
                                                                                     432 AGGAAAGAACTATTGCACAGCCAAAACATTGTATATATCTGACTCAGACAAGCGAAAGCA 491
                                                                                                                                   423 ACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAACTTGGA 482
                                                                                                                                                                           372 ACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAACTTGGA 431
                                                                                                                                                                                                                      363 CGGATGGAAGAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCA
                                                                                                                                                                                                                                               312 CGGATGGAAGAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCA 371
                                                                                                                                                                                                                                                                                                            303 GTCATATGGAAATGAAAAAGGTTTTTTTGCCCCACCTCCTTGTGTATATCTTATGGGCAG 362
                                                                                                                                                                                                                                                                                                                                                                                               243 TTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAA 302
                                                                                                                                                                                                                                                                                                                                                                                                                      192 TTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAA 251
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RESULT 6
AAX40082
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                                                                                          Matches
                                                                                                                                                                            The invention relates to a method for diagnosing a disorder characterised by expression of a human cancer associated antigen precursor coded for by a nucleic acid molecule (AMM). The method comprises: (a) contacting a biological sample isolated from a subject with an agent that specifically binds to the NAM, an expression product or a fragment of an expression product to the Complexed with an HLA molecule; and (b) determining the interaction between the agent and the NAM or the expression product as a determination of the disorder. The products and methods can be used in the diagnosis, monitoring, research, or treatment of conditions characterised by the expression of various cancer associated antigen precursors expressed in human breast cancer, renal cancer, colon cancer, gastric cancer, prostate cancer and
                                                                                                                                                                                                                                                                                                                                                                                        New isolated cancer associated nucleic acids and polypeptides - isolated using sera from cancer patients, used to develop products for the diagnosis, monitoring or treatment of cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-OCT-1997;
10-OCT-1997;
10-OCT-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cancer associated antigen; diagnosis; research; treatment; human; breast cancer; colon cancer; gastric cancer; renal cancer; lung cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gastric cancer associated gene.
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                                                                                                                                            Sequence 666 BP; 214 A; 120 C; 155 G; 173 T; 4 other;
                                                                                                                                                                                                                                                                                                                                                                Claim 67; Page 691; 787pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-132448/11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chen Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-JAN-1999.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LUDW-) LUDWIG INST CANCER RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-JUL-1998;
                                                                                                                                                                      lung cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     543
             192 TTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAA 251
                                                                 132 GCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAA 191
                                        3
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                                       GACAGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAA 90
h 72.5%;
Similarity 98.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gout I,
                                                                                          Conservative
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97US-0061765.
97US-0948705.
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Sahin U,
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Scanlan MJ,
                                                                                         0; Mismatches
                                                                                                      Score 362.6;
Pred. No. 1.1
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                                                                                                      1.8e-103;
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                                                                                                                 DB 20; Length 666;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                  17-JUL-1997;
10-OCT-1997;
10-OCT-1997;
10-OCT-1997;
The invention relates to a method for diagnosing a disorder characterised by expression of a human cancer associated antigen precursor coded for by a nucleic acid molecule (NAM). The method comprises: (a) contacting a biological sample isolated from a subject with an agent that specifically binds to the NAM, an expression product or a fragment of an expression product complexed with an HLA molecule; and (b) determining the interaction between the agent and the NAM or the expression product as a
                                                                                                                                                                                                                      Chen Y, Gout I
Pfreundschuh M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gastric cancer associated gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX40076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX40076 standard; DNA; 707 BP.
                                                                                                      Claim 67; Page 689-689; 787pp; English.
                                                                                                                                                                                  WPI; 1999-132448/11.
                                                                                                                                                                                                            Turect of
                                                                                                                                                                                                                                                                                                                                                                                                           28-JAN-1999
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                                                                                                                                                                                                                                                            (LUDW-) LUDWIG INST CANCER RES.
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97US-0061599.
97US-0061765.
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                                                                                                                                                                                                                        Gure
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                                                                                                                                                                                                                         O'Hare M,
Scanlan MJ,
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New isolated cancer associated nucleic acids and polypeptides - isolated using sera from cancer patients, used to develop products for the diagnosis, monitoring or treatment of cancers
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                              WPI; 2001-025274/03
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; breast cancer; gastric cancer; prostate cancer; diagnosis; cancer associated antigen; cytostatic; cancer vaccine; ss.
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                                                                                                                                             (LUDW-) LUDWIG INST CANCER RES
                                                                                                                                                                                                      28-MAY-1999;
10-SEP-1999;
                                                                                                                                                                                                                                                                                       26-MAY-2000; 2000WO-US14749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human prostate cancer associated antigen nucleotide sequence SEQ ID:369.
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99US-0153454.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF22422 to AAF22626, AAF22627 to AAF22773 and AAF22774 to AAF23014 represent nucleotide sequences encoding human breast, gastric and prostate cancer associated antigen precursors (CAAP) respectively. AAB63232 to AAB63467, AAB63468 to AAB63721 and AAB63722 to AAB63970 represent human breast, gastric and prostate CAAP protein sequence respectively. CAAPs have cytostatic activity and can be used in the production of cancer vaccines. The human CAAP proteins, peptides, nucleic acids or anti-CAAP antibodies are useful for diagnosing and treating a condition characterised by expression of an abnormal amount of a protein,
                                                                                                                                                  Cancer associated gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 50; Page 395; 799pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nucleic acids encoding breast, gastria and prostate cancer associated antigen precursors, useful for diagnosing and treating a condition characterized by expression of an abnormal amount of a protein, e.g.
                                26-JUL-2001.
                                                                  WO200153524-A2
                                                                                                  Homo sapiens.
                                                                                                                                  oesophageal cancer;
                                                                                                                                                                                    Nucleotide sequence of JK-recombination signal binding protein gene.
                                                                                                                                                                                                                      01-OCT-2001 (first entry)
                                                                                                                                                                                                                                                        AAH42783;
                                                                                                                                                                                                                                                                                          AAH42783 standard; DNA; 373 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1336 BP; 400 A; 239 C; 356 G; 333 T; 8 other;
                                                                                                                                                                                                                                                                                                                                                                                771 TGTT 774
                                                                                                                                                                                                                                                                                                                                                                                                                497
                                                                                                                                                                                                                                                                                                                                                                                                                                                  711 AGAACTATTGCACAGCCAAAACATTGTATATATATCTGACTCAGACAAGCGAAAGCACTTCA 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    651
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          257 ATGGAAATGAAAAAAGGTTTTTTTGCCCACCTCCTTGTGTATATCTTATGGGCAGCGGAT 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                412 GGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATT 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                137 GGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATT 196
                                                                                                                                                                                                                                                                                                                                                                                                                TTTT 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGAACTATTGCACAGCCAAAACATTGTATATATCTGACTCAGACAAGCGAAAGCACTTCA 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAAG - AAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCAACCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAAGAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCAACCGT 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGAAATGAAAAAGGTTTTTTTGCCCACCTCCTTGTGTATATCTTATGGGCAGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAAGTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAAGTCAT 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361;
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                                                                                                                                  cancer; vaccine; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69.8%;
99.2%;
                                                                                                                                                  prostate cancer; stomach cancer;
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Pred. No. 5.6
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18-JAN-2001; 2001WO-GB00188.

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RESULT 10
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAH42781-AAH42846 represent the nucleotide sequences of cancer associated genes, identified using SEREX (Serological Identification of Antigens by Recombinant Expression Cloning). The genes are overexpressed in prostate cancer, and some are overexpressed in other cancers such as stomach cancer and oesophageal cancer. The nucleic acids are useful for detecting and monitoring cancer, particularly prostate cancer. They are particularly useful in the treatment or prevention of cancer, in producing DNA-based vaccines against prostate cancer or that promote anti-tumor immune responses, and to raise antibodies. The expression of genes and detection of their protein products and/or peptides may be used to monitor disease progression during therapy, or as a prognostic indicator of initial disease status of the patient.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 373 BP; 128 A; 59 C; 93 G; 93 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Page 18; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Use of cancer-associated genes and their products in detecting, monitoring, treating or preventing cancer, specifically prostate cancer, and in developing DNA-based vaccines that promote anti-tumor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-476121/51
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                Cancer associated antigen; diagnosis; research; treatment; human; breast cancer; colon cancer; gastric cancer; renal cancer; lung cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYNO-) UNIV NOTTINGHAM TRENT
  prostate cancer;
                                                                          Breast cancer associated gene.
                                                                                                                02-JUL-1999
                                                                                                                                                                                      AAX39641 standard; DNA; 1599 BP
                                                                                                                                                                                                                                                                               330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        252 GTCATATGGAAATGAAAAAAGGTTTTTTTGCCCCACCTCCTTGTGTATATCTTTATGGGCAG 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          192 TTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAA 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                210 TGGATGGAAGAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCA 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                             312 CGGATGGAAGAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCA 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   150 GTCATATGGAAATGAAAAAGGTTTTTTTGCCCACCTCCTTGTGTATATCTTATGGGCAG 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90 TTATTTAAAAGAGCGAGGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAA 149
                                                                                                                                                                                                                                                                                                                AGGAAAGAACTATTGCACAGCCAAAACATTGTATATATCTGACT 475
                                                                                                                                                                                                                                                                               ACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAACTTGGA 329
                                                                                                                                                                                                                                                                                                                                                                                         ACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAACTTGGA 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                           (first entry)
      SS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 22; Length 373;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a method for diagnosing a disorder characterised by expression of a human cancer associated antigen precursor coded for by a nucleic acid molecule (NAM). The method comprises: (a) contacting a biological sample isolated from a subject with an agent that specifically binds to the NAM, an expression product or a fragment of an expression product and the many of the agent and the latermining the interaction between the agent and the NAM or the expression product as a determination of the disorder. The products and methods can be used in the diagnosis, monitoring, research, or treatment of conditions characterised by the expression of various cancer associated antigens. The invention provides nucleic acid sequences and encoded polypeptides which are cancer associated antigen precursors expressed in human breast cancer, renal cancer, colon cancer, gastric cancer, prostate cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-JUN-1998;
17-JUL-1997;
10-OCT-1997;
10-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated cancer associated nucleic acids and polypeptides - isolated using sera from cancer patients, used to develop products for the diagnosis, monitoring or treatment of cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1599 BP; 498 A; 317 C; 358 G; 426 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 67; Page 401-402; 787pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-132448/11.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfreundschuh M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (LUDW-) LUDWIG INST CANCER RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                      137
                                                                                                                                                                                                                                                                                                                                                                                     137 GGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATT 196
                                                                                                                                                                                                                                                                                                                   197
                                                          377
                                                        GGAAGAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAGTCTCAACCGT 376
                                                                                                                                                                                                         ATGGCAATCAAAAATTTTTTTTTGCCCTCCCCCTTGTGTATATCTTATGGGCAGTGGAT 316
                                                                                                                                                                                                                                                                                                TAAAAGAGCGAGGGATCAAACAGTACTTATTCTTCATGCAAAAGTTGCACAGAAGTCAT 256
                                                                                                                                                                                                                                                                                                                                                      GGAAATTTGGTAAGTGGCTTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAATTATT 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer.
AGAACTATTGCACAGCCAAAACATTGTATATATCTGACTCAGACAAGCGAAAGCACTTCA
                                                                                                                                GGAAGAAAAAAAAAAGAACAAATGAAATGCGATGGTTGTTCTGAACACAGCTCTCATCCAT 376
                                                                                                                                                                                                                                                                               TAAAAGGGTAAGGGGATCAAATAGTACTTATCCTTCATGCAAAAGTTGTACAGAAGTCAT 256
                                                                                                                                                                                                                                          ATGGAAATGAAAAAAGGTTTTTTTGCCCCACCTCCTTGTGTATATCTTATGGGCAGCGGAT 316
                                                                                                                                                                                                                                                                                                                                                                                                                            337;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
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4, Sahin U,
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97US-0896164.
97US-0061599.
97US-0061765.
97US-0948705.
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                                                                                                                                                                                                                                                                                                                                                                                                                                             92.68;
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                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 320.8; DB Pred. No. 3.7e-90
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Obata Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stockert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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                                                                                                                                                                                                                                                                 CC cancer associated nucleic acid molecules (N) and proteins (P), where Ct he proteins are collectively known as colon cancer antigens. The colon C cancer antigens have cytostatic activity and can be used in gene therapy and vaccine production. N and P may be used in the prevention, CC diagnosis and treatment of diseases associated with inappropriate P C expression. For example, N and P may be used to treat disorders in a patient's genome that affect the activity of P by expressing CC inactive proteins or to supplement the patients own production of P. CC Additionally, N may be used to produce the colon cancer-associated Ps. CC Additionally, N may be used to produce the colon cancer-associated Ps. CC Inactive proteins or to supplement the patients own production of Ps. CC Additionally, N may be used to produce the colon cancer-associated Ps. CC Inactive proteins. N and P cancer cancer associated Ps. CC Additionally, N may be used into a host cell and culturing the cell constraint of colorectal carcinomas and cancers. Analyzing to Analyzing and Analyzing to Analyzing the proteins of colorectal carcinomas and cancers. Analyzing to Analyzing the proteins of the present invention.
                                                                                                                       Query Match
                                                                                                                                                                                       present invention.

N.B. Pages 666 to 682 and page 7053 of the sequence listing were missing at time of publication, meaning no sequences are present for SEQ ID NO:1027 to 1052, 7921 and 7922.
                                                                                                                                                           Sequence 473 BP; 142 A; 76 C; 136 G; 114 T; 5 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 2571; 9803pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nucleic acids encoding 4277 human colon cancer-associated polypeptides, useful for preventing, diagnosing and/or treating colorectal cancers -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ruben SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-SEP-1999;
03-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-APR-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-SEP-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-SEP-2000; 2000WO-US26524
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; colon cancer; colon cancer antigen; diagnosis; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human colon cancer antigen encoding cDNA SEQ ID NO:482.
                                     132 GCCTGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAA 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 497
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91 GACAGGGAAATTTGGTGAGCGGCCTCCACCTAAACGACTTACTAGGGAAGCTATGCGAAA 150
                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-235357/24.
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                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Barash SC,
                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
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                                                                                             63.9%; Score 319.6; DB : 97.2%; Pred. No. 4.7e-90
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                                                                               4;
                                                                               Mismatches
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                                                                                                                 DB 22; Length 473;
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                                                       e.g. cancer.
                                                                                      condition characterised by expression of an abnormal amount of a protein,
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Best Local Similarity

62.5%; 96.6%;

Pred. No. 8.9e-88; Score 312.6;

DB 22; Length 665;

Query Match

Sequence 665 BP; 218 A; 115 C; 154 G; 174 T; 4 other;

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AAF22422 to AAF22626, AAF22627 to AAF22773 and AAF22774 to AAF23014 represent nucleotide sequences encoding human breast, gastric and prostate cancer associated antign procursors (CAAP) respectively. AAB63232 to AAB63467, AAB63468 to AAB63721 and AAB63722 to AAB63970 represent human breast, gastric and prostate CAAP protein sequence respectively. CAAPs have cytostatic activity and can be used in the production of cancer vaccines. The human CAAP proteins, peptides, nucle acids or anti-CAAP antibodies are useful for diagnosing and treating a condition characterised by expression of an abnormal amount of a protein
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                                                                                                                                                                                                                                                         Page 396-397; 799pp; English.
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  AAF22422 to AAF22626, AAF22627 to AAF22773 and AAF22774 to AAF23014 represent nucleotide sequences encoding human breast, gastric and prostate cancer associated antigen precursors (CAAP) respectively.

AAB63232 to AAB63467, AAB63468 to AAB63721 and AAB63722 to AAB63970 represent human breast, gastric and prostate CAAP protein sequence respectively. CAAPs have cytostatic activity and can be used in the production of cancer vaccines. The human CAAP proteins, peptides, nu
                                                                                                                                                                                                                                                                                Nucleic acids encoding breast, gastric and prostate cancer associated antigen precursors, useful for diagnosing and treating a condition characterized by expression of an abnormal amount of a protein, e.g.
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                                                                                                             Claim 50; Page 395; 799pp; English.
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10-SEP-1999;
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AAF22422 to AAF22626, AAF22627 to AAF22773 and AAF22774 to AAF23014
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  Search completed: October 10, Job time: 90 secs
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time : 90 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              represent nucleotide sequences encoding human breast, gastric and prostate cancer associated antigen precursors (CAAP) respectively. AAB63232 to AAB63468 to AAB63721 and AAB63720 represent human breast, gastric and prostate CAAP protein sequence respectively. CAAPs have cytostatic activity and can be used in the production of cancer vaccines. The human CAAP proteins, peptides, nucleic acids or anti-CAAP antibodies are useful for diagnosing and treating a condition characterised by expression of an abnormal amount of a protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 815 BP; 261 A; 149 C; 179 G; 218 T; 8 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e.g. cancer.
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                                                                                                                                                               TTGGAAGGAAAGAACTATTGCACAGCCAAAACATTGTATATATCTGACTCAGACAAGCGA 486
                                                                                                                                                                                                                    TCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAAC 179
                                                                                                                                                                                                                                   TCTCAACCGTGTGCATTTATTGGGATAGGAAATAGTGACCAAGAAATGCAGCAGCTAAAC 426
                                                                                                                                                                                                                                                                                                            GGCAGCGGATGGAAGAAAAAAAAAAAGAACAAATGGAACGCGATGGTTGTTCTGAACAAGAG
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98.8%;
                    2002, 15:15:40
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Pred. No. 1.4
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Post-processing: Minimum Match 0% Maximum Match 100%
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Maximum DB seq length: 2000000000
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Perfect score:
                                                                                                                                        is derived by analysis of the total score distribution.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Issued_Patents_NA:*
1: /cgn2_6/ptodata/2,
2: /cgn2_6/ptodata/2,
3: /cgn2_6/ptodata/2,
4: /cgn2_6/ptodata/2,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6A_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
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6556.054 Million cell updates/sec
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Sequence 5,	Sequence 1,	Sequence 1,	Sequence 1,	Sequence 1,	Sequence 3,	Sequence 3,	Sequence 3,	Sequence 3,	Sequence 3,	Sequence 1,	Sequence 4,	Sequence 4,	Sequence 4,	Sequence 4,	Sequence 16,	Sequence 257,	Sequence 3,
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; LOCATION:
US-08-200-232-3
                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1541 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, Application US/08200232

Patent No. 5721349

APPLICANT: Cover, Timothy L.
APPLICANT: Blaser, Martin J.

TITLE OF INVENTION: VACUOLATING TOXIN-DEFICIENT H. PYLORI
TITLE OF INVENTION: AND RELATED METHODS

NUMBER OF SEQUENCES: 18

CORRESPONDENCE ADDRESS:
ANDRESSERS. METENTE & DOCEMBER OF SEQUENCES INCORRESSIONED ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Spratt, Gwendolyn D.
REGISTRATION NUMBER: 36,01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 404/688-0770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA: US
                                                                                                                                                                          MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: Georgia
COUNTRY: USA
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CITY: Atlanta
STATE: Georgia
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                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 22: LECOMMUNICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: NEEDLE & ROSENBERG P.C. 127 Peachtree Street, Suite 1200
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Score 29.8; DB 1;
Pred. No. 5.2;
0; Mismatches 42;
                                           Length 1541;
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PCT-US95-02219-3/c
                                                                                                                                       PCT-US95-02219A-3/c
                                                                                                                                                             RESULT 3
                                              Sequence 3, Application PC/TUS9502219A
GENERAL INFORMATION:
APPLICANT: Cover, Timothy L.
APPLICANT: Tummuru, Murali KR
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GENERAL INFORMATION:
APPLICANT: COVEY, Timothy L.
APPLICANT: Blaser, Martin J.
TITLE OF INVENTION: VACUOLATING TOXIN-DEFICIENT H. PYLORI
TITLE OF INVENTION: AND RELATED METHODS
NUMBER OF SEQUENCES: 18
                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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INFORMATION FOR SEQ ID NO: 3:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UNMBER: PCT/US95/02270
FILING DATE:
CLASSITETING
                                                                                                                                                                                                                           1339 CAGAAATATTGTCATAACTAGCGCCTTGCACTCCCAC 1303
                                                                                                                                                                                                                                                                                                              1399 TGTTGTTGTTATAAAGGGCTAGGCGCTCTTTGAATTGCTCTTGCAGATTGGTTGCTTG 1340
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REGISTRATION NUMBER: 36,016
REFERENCE/DOCKET NUMBER: 22
TELECOMMUNICATION INFORMATION:
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ADDRESSEE: NEEDLE & ROSENBERG P.C.
STREET: 127 Peachtree Street, Suite 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1339 CAGAAATATTGTCATAACTAGCGCCTTGCACTCCCAC 1303
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LENGTH: 1541 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: DNA (genomic)
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         APPLICANT:
                                                                                                                                                                                                                                                                  228 CTCAAACATCAATATCACCAGAGCCCTTGAGGAACAC 264
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STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                        Local
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Similarity 56.7%;
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                           Tummuru, Murali KR
Cao, Ping
         Thompson, Stuart A.
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; LOCATION:
PCT-US95-02219A-3
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INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1541 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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Patent No. 5654397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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Best Local S
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                        APPLICANT: CAO, Zhaodan
APPLICANT: CROSTON, Glenn E.
APPLICANT: GOEDDEL, David V
APPLICANT: GOEDDEL, David V
TITLE OF INVENTION: INTERLEUKIN-1 RECEPTOR-ASSOCIATED
TITLE OF INVENTION: PROTEIN KINASE AND BINDING ASSAY
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1339 CAGAAATATTGTCATAACTAGCGCCTTGCACTCCCAC 1303
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 404/688-0770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Blaser, Martin J.
TITLE OF INVERVION: VACUOLATING TOXIN-DEFICIENT H. PYLORI
TITLE OF INVERVION: AND THE RELATED METHODS
NUMBER OF SEQUENCES: 19
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                                                                                                       ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco STATE. California
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CITY: Atlanta
STATE: Georgia
                                                                                        COUNTRY:
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REGISTRATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
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                                                                    94111-4187
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OPERATING SYSTEM: SOFTWARE: Patentl

PC-DOS/MS-DOS

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PCT-US96-09193-1
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 494-8700
TELEFAX: (415) 494-8771
TELEX: 910 27729
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application PC/TUS9609193 GENERAL INFORMATION:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: INTERLEUKIN-1 RECEPTOR-ASSOCIATED TITLE OF INVENTION: PROTEIN KINASE AND BINDING ASSAY NUMBER OF SEQUENCES: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1096 AGACATCAAGAGTTCCAACGTCCTTCTGGATGAGAGGCTGACACCCAAGCTGGGAGACTT 1155
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ATTORNEY/AGENT INFORMATION:
NAME: Osman Ph.D., Richard Aron
REGISTRATION NUMBER: 36,677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/587,889
                ATTORNEY/AGENT INFORMATION:
NAME: David J. Brezner
REGISTRATION NUMBER: 24,774
REFERENCE/DOCKET NUMBER: FP
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                       CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: (FILING DATE: JAN 16
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                                                                                                                    CLASSIFICATION:
APPLICATION NUMBER:
FILING DATE: JUNE 23
CLASSIFICATION:
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                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/
FILING DATE: JUNE 5 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 3590 base pairs TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE:
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Similarity 55.2%;
58; Conservative
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(415) 494-8700
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                                                                                                                                                                                                       JAN 16 1996
                                                                                                                                            JUNE 23 1995
                                                                                                                                                                                                                                                                                                                                                        Release #1.0, Version #1.30
                                                                                                                                                                 U.S. Serial No. 08/494,006
                                                                                                                                                                                                                               U.S. Serial No. 08/587,889
                                                                                                                                                                                                                                                                                                             PCT/US96/09193
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                                        FP-62191-1
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Sequence 7, Application US/09417822
Patent NO. 6344549
GENERAL INFORMATION:
APPLICANT: Reegan, Kathy
TITLE OF INVENTION: ATR-2
FILE REFERENCE: 27866/35633
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; Sequence 6, Application US/09417822
; Patent No. 6344549
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 5.9%; Score 29.6; DB 4; Length 4495; Best Local Similarity 45.6%; Pred. No. 10; Matches 104; Conservative 0; Mismatches 124; Indels 0
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TITLE OF INVENTION: ATR-2
FILE REFERENCE: 27866/35633
CURRENT APPLICATION NUMBER: US/09/417,822
CURRENT FILING DATE: 199-10-14
NUMBER OF SEQ ID NOS: 43
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TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 3590 base pairs
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TYPE: DNA
ORGANISM: Homo sapiens
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DEDNESS: double
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Pred. No. 7.8;
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US-09-417-822-8/c
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CURRENT FILING DATE: 1999-10-14
NUMBER OF SEQ ID NOS: 43
SOFTMARE: Patentin Ver. 2.0
SEQ ID NO 8
LENGTH: 4535
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Patent No. 6344549
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CURRENT FILING DATE: 1999-10-14
NUMBER OF SEQ ID NOS: 43
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Keegan, Kathy
TITLE OF INVENTION: ATR-2
FILE REFERENCE: 27866/35633
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ORGANISM: Homo sapiens
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135 GCTAAAAGGCCTTTGCAAAATTTATGGAAAGACGGAAGAGAGAATAAA 88
                                                                                        195 AGAGCATGTAGACTGCTGCATGCCTGCAGACAGATATTCACATCTTCAACGAGAGTGTTG 136
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                                          242 TCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAAA 289
                                                                                                                                     182 AGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATCAATA 241
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45.6%; Pred. No. 10;
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RESULT 10
PCT-US95-05512-1/c
PCT-US95-05512-1/c
Sequence 1, Application PC/TUS9505512
GENERAL IMPORMATION:
APPLICANT: Tonks, Nicholas K. and stman, Arne
Density Enhanced Protein Tyrosine
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                                                                                                 TITLE OF INVENTION: Density Enno
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LENGTH: 5117 base pairs
TYPE: nucleic acid
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NAME: BOTUN, MICHAEL F.
REGISTRATION NUMBER: 25,447
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION: INFORMATION:
TELEPHONE: 312-474-6300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                         2295 TCAAAGTTCTGCCAACTTAAAGTTGCTGCTGTGTGTTTGGTACTTACATCAATGTTGGAC 2236
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
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                                                                                                                                                                                                                                                                                                                    145 CGATCACTGGGAGATGTCCTCCGTGATGTTGA 176
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CITY: Chicago
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STATE:
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                                                ADDRESSEE:
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Illinois
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                              233 South Wacker Drive, Suite 6300
                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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                                                  Borun
                                                                  Marshall, O'Toole, Gerstein, Murray &
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APPLICANT: Keegan, Kathy
TITLE OF INVENTION: ATR-2
FILE REFERENCE: 27866/35633
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LOCATION:
PCT-US95-05512-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/09417822
Patent No. 6344549
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5117 base pairs
                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/417,822
CURRENT FILING DATE: 1999-10-14
NUMBER OF SEQ ID NOS: 43
                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                NAME/KEY: CDS
LOCATION: (31)..(8820)
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                    ID NO 1
314 AAAGGAATTGATTTCAACAGTTTTCCAAATGCTTGTCGAATACGAGTTCCACTGTGCACT 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85 TCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTTCGAATAATTACATCAGAGCTCTAT 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Borun, Michael F. REGISTRATION NUMBER: 25, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US95/05512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                 62 AAATCAAAGAACATTTACTGAAGTCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTTC 121
                                                                                          Poca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oca1
                                                                       104; Conservative
                                                                                      similarity 45.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              h 5.9%; Score 29.6; DB 5; Length 5117; Similarity 57.6%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               312-474-0448
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men: 25,447
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                                                                                      Score 29.6; DB 4; Length 8838; Pred. No. 14;
                                                                     Mismatches 124; Indels
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                                                                     0; Gaps
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US-08-463-115-89/c
; Sequence 89, Application US/08463115
; Patent No. 5703221
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                                                                                         STRANDEDNESS: Sir
; TOPOLOGY: linear
US-08-463-115-89
  matches
                                            Query Match
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                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA: including application PRIOR APPLICATION DATA: described below: APPLICATION NUMBER: 06,157,811
FILLING DATE: NO. 5703221ember 23, 1993
APPLICATION NUMBER: 07,7687,502
FILING DATE: May 22, 1992
APPLICATION NUMBER: 07,764,814
FILLING DATE: May 33, 1991
APPLICATION NUMBER: 07,763,039
APPLICATION NUMBER: 07,763,039
APPLICATION NUMBER: 07,763,039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 663 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 21
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: September 20, 1991 ATTORNEY/AGENT INFORMATION: NAME: Warburg, Richard J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: FastSeq Version 1.5
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: ISOLATED STEALTH VIRITITLE OF INVENTION: AND RELATED VACCINES NUMBER OF SEQUENCES: 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194 AGAGCATGTAGACTGCTGCATGCCTGCAGACAGATATTCACATCTTCAACGAGAGTGTTG 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182 AGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATCAATA 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254 AGTTGAACACGGCAAACATCGACACATCTCTGTAAAAAGATCATCTGGCAAGGAAGAAGAGCAC 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 GAATAATTACATCAGAGCTCTATCGATCACTGGGAGATGTCCTCCGTGATGTTGATGCCA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242 TCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAAAA 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: 0.0066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08, FILING DATE: June 5, 1995
y Match 5.9%; Score 29.4; DB 1; Length 663; Local Similarity 60.8%; Pred. No. 4.6; Local Similarity 60: Mismatches 31; Indels
                                                                                                                                                                                                                                                                           TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                       NAME: Warburg, Riche REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM:
                                                                                                                                                        nucleic acid
                                                                                                                                                                                                                                                      (: (213) 955-0440
67-3510
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                                                                                                                                   single
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158 ATGTCCTCCGTGATGTTGATGCCAAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATG 217

567 ACGTACTGGGAGATGAAAGTCCACATTCTTCACAGCACTCTGACTCGCTGGAGGATG 508

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US-08-465-388-89
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APPLICATION NUMBER: 07/76, 814

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                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 89:
SEQUENCE CHARACTERISTICS:
LENGTH: 663 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Warburg, Richard J.
REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 21
TELECOMMUNICATION INFORMATION:
TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSeq Version 1.5 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: September 20, 1991 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: ISOLATED STEALTH VIRITITLE OF INVENTION: AND RELATED VACCINES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                               158 ATGTCCTCCGTGATGTTGATGCCAAGGCTTTGGTGCGCTCTGACTTTCTTCTTCTGGTGTATG 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                       507 AGGAACTCTCCACAGACAT 489
                                                                   218 GGGATGTCATCTCAAACAT 236
                                                                                                         567 ACGTACTGGGAGATGAAAGTCCACATTCTTCACAGCACTCTGACTCGCTGCTGGAGGATG 508
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STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/465,388 FILING DATE: June 5, 1995 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (213) 955-0440 TELEX: 67-3510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                   Local
                                                                                                                                                                                                  48;
                                                                                                                                                                                                                Similarity
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633 West Fifth Street
Suite 4700
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                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                      linear
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                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                              5.9%;
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                                                                                                                                                                                             0;
                                                                                                                                                                                           Score 29.4; DB 1; Length 663; Pred. No. 4.6; 0; Mismatches 31; Indels
                                                                                                                                                                                             0,
                                                                                                                                                                                        Gaps
                                                                                                                                                                                             0,
Sequence 88, Application US/08465388; Patent No. 5753488; GENERAL THREE
                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 669 base pairs;
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-463-115-88
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GENERAL INFORMATION:
APPLICANT: WILLIAM JOHN MARTIN
APPLICANT: WILLIAM JOHN MARTIN
TITLE OF INVENTION: ISOLATED STEALTH VIRUSES
TITLE OF INVENTION: AND RELATED VACCINES
NUMBER OF SEQUENCES: 104
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (213) 489-1600
TELEAX: (213) 955-0440
TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 88
SEQUENCE CHARACTERISTICS:
LENGTH: 669 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence 88, Application US/08463115 Patent No. 5703221
                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA: including application PRIOR APPLICATION DATA: described below: APPLICATION NUMBER: 08/157,811
FILING DATE: No. 5703221ember 23, 1993
APPLICATION NUMBER: 07/887,502
FILING DATE: May 22, 1992
APPLICATION NUMBER: 07/704,814
FILING DATE: May 23, 1991
APPLICATION NUMBER: 07/763,039
APPLICATION NUMBER: 07/763,039
FILING DATE: September 20, 1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: FastSeq Version 1.5
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                               513 AGGAACTCTCCACAGACAT 495
                                                                                                                                                                                                                                      573 ACGTACTGGGAGATGAAAGTCCACATTCTTCACAGCACCTCTGACTCGCTGCTGGAGGATG 514
                                                                                                                                                                                        218 GGGATGTCATCTCAAACAT 236
                                                                                                                                                                                                                                                                              158 ATGTCCTCCGTGATGTTGATGCCAAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATG 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: Lyon & Lyon
STREET: 633 West Fifth Street
STREET: Suite 4700
CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                           Docal Similarity 60.8%; Local Similarity 60.8%; es 48; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 21: LECOMMUNICATION THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08, FILING DATE: June 5, 1995 CLASSIFICATION: 435
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Warburg, Richard J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90071-2066
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Pred. No. 4.6;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                Length 669;
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Search completed: October 10, 2002, 18:14:28 Job time: 38.7333 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 88:
SEQUENCE CHARACTERISTICS:
LENGTH: 669 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPOSITION COMPOSITION

SOSTWARE: FRATSEQ VETSION 1.5

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/465,388

FILING DATE: June 5, 1995

CLASSIFICATION DATA:

PRIOR APPLICATION DATA:

PRIOR APPLICATION DATA:

APPLICATION DATA:

APPLICATION DATA:

APPLICATION NUMBER: 08/157,811

FILING DATE: No. 5753488ember 23, 1993

APPLICATION NUMBER: 07/887,502

FILING DATE: May 22, 1992

APPLICATION NUMBER: 07/867,502

FILING DATE: May 22, 1992

APPLICATION NUMBER: 07/04,814

FILING DATE: May 23, 1991

APPLICATION NUMBER: 07/763,039

FILING DATE: May 23, 1991

APPLICATION NUMBER: 07/763,039

FILING DATE: May 23, 1991

APPLICATION NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,327

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RESERENCE/DOCKET NUMBER: 32,327

RESERENCE/DOCKET NUMBER: 32,3200

TELEFAX: (213) 95-0440

TELEFAX: (213) 95-0440
                                                                                                                                                                                                                                                                                                                                                                                      Query Match 5.9%; Score 29.4; DB 1; Length 669; Best Local Similarity 60.8%; Pred. No. 4.6; Matches 48; Conservative 0; Mismatches 31; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: Storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
COFFREADER: FRAFFOR VERSION 1.5
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TITLE OF INVENTION: ISOLATED STEALTH VIRUSES
TITLE OF INVENTION: AND RELATED VACCINES
NUMBER OF SEQUENCES: 104
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STREET: Suite 4700
CITY: Los Angeles
STATE: California
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633 West Fifth Street
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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1 gaattcctgactgccacagg.....cgatatgatttactggattg 500
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GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
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AL532402 AL532402
BM464486 AGENCOURT
            BF976694 602243611
BG6B5786 602637891
BIT53143 603025996
BG333881 602460213
BE740422 601595455
                                                                     BG478628 602525515
BE408507 601303024
AL553746 AL553746
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 BG476370 602521874
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B1602244 BG47525 B1600224 B1804220 B1258553 BF512821 BF512821 BF514366 B1693233 BF510996 BG420072	BEA09574 BIB24942 BG476233 BG476233 BM464540 BM0843375 BG282087 BE902069 BG337550 BG337550 BG337550 BG325760 B1915099 BG820903 BG340922 BB409885	BE386238 BM008455 BF307478 BE727120 BG478857
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## ALIGNMENTS

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REFERENCE
AUTHORS
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1 (Dases 1 to 713)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                           Email: ggapbs-r@mail.nih.gov
Tissue Procurement: ATCC/DCTD/DTP
CDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM284 row: h column: 10
High quality sequence stop: 611.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
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/tissue_type="melanotic melanoma"
/lab host="DHIGB (phage-resistant)"
/lab host="DHIGB (phage-resistant)"
/note="Organ: skin; Vector: poTBP; Site_1: XhoI; Site_2: CORT; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GECACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of
                                                                                                                                                                                                                                             /db_xref="taxon:9606"
/clone="IMAGE:3617337"
/clone_lib="NIH_MGC_20"
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/db_xref="taxon:9606"
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RESULT 2
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                                                                                                                                                                                                                                                                                                                         AL549103 ATI_NFL006_PL2 Homo prime, mRNA sequence.
                                                                                                        Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: segref@genoscope.cns.fr, Web: www
                                                                                                                                                               Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 872)
                                                                                                                                                 Contact: Genoscope
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AL549103.1 GI:12884761
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                                                                                        seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)." a 162 c 170 g 195 t
              /clone="CS0DI051YK06"
/clone_lib="LTI_NFL006_PL2"
                                               /db_xref="taxon:9606"
                                                          /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 500; DB 10; 100.0%; Pred. No. 2.3e-144; Live 0; Mismatches 0;
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lomo sapiens cDNA clone CS0DI051YK06 5
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Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 928)
Li,W.B., Gruber,C., Jessee,J. and Polayes,
Full-length cDNA libraries and normalizat;
Unpublished (2001)
Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
                                                                                                                                                                   EST
                                                                                                                                                                                              prime, mRNA sequence. AL556496
                                                                                                                                    Homo sapiens
                                                                                                                                                                                 AL556496.1 GI:12899223
                                                                                                                       Eukaryota; Metazoa;
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481 CGATATGATTTACTGGATTG 500
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Pred. No. 2.5e-144;
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Jessee, J. and Polayes, D.

normalization

Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.

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Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                              EST
                                                                             prime, mRNA sequence.
AL549090
AL549090.1 GI:12884735
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Location/Qualifiers
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224 c 253 q 229 t
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/tissue_type="placenta"
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/note="Vector: pCMYSPORT 6; Site_1: NotI; lst strand
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Pred. No. 2.6e-144;
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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/note="Vector: pCMVSPORT 6; Site_1: NotI; 1st strand cDNA
/note="Vector: pCMVSPORT 6; Site_1: NotI; 1st strand cDNA
was primed with a NotI-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
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vector. Library was normalized. Library was constructed by
Life Technologies. Contact : Feng Liang Life Technologies,
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Rockville, Maryland 20850, USA Fax : (1) 301 610 8371
Email : fliang@lifetech.com URL :
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/clone_lib="LTI_NFL006_PL2"
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                                                                     579 GTGGTAGTGGCTGTGGATAGTACCACAAACAGGGTTCTCCATTTTCAGAAGACCCAGGGT
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                                                                                                             361 GTGGTAGTGGCTGTGGATAGTACCACAAACAGGGTTCTCCATTTTCAGAAGACCCAGGGT 420
                                                                                                                                                                                                                                                                                               241 ATCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAAAAATGTTTCTGTG 300
                                                                                                                                                                                                                                                                                                                                                                                      181 AAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATCAAT 240
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 865)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)
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BP 191 91006 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             //note="Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies. Contact: Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax: (1) 301 610 871 Email: fliang@lifetech.com URL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
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/lab_host="DH10B"
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/clone_lib="LTI_NFLOO3_NBC3"
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    Mismatches

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Best Local
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313 CAAATCAAARAACATTTACTGAAGTCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTT
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AL532402 LTI_NFL001_NBC4 Homo
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/clone_lib="LTI_NFL001_NBC4"
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/db_xref="taxon:9606"
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/lab_host="DH10B"
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Pred. No. 4.6e-144;
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121 CGAATAATTACATCAGAGCTCTATCGATCACTGGGAGATGTCCCTCCGTGATGTTGATGCC 180
                                                                                                                                                                                                                        1 GAATTCCTGACTGCCACAGGTGTACAGGAAACATTTGTCTTTTTGTTGCTGGAAAGCTGCT 60
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AGENCOURT_6439009 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:5535574
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 1138)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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High quality sequence stop: 650.
Location/Qualifiers
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                         /Clone="IMAGE:553574"
/Clone=lib="NIH_MGC_71"
/Clone=lib="NIH_MGC_71"
/Lib_host="DH10B (phage-resistant)"
/Lab_host="DH10B (phage-resistant)"
/note="Organ: uterus; Vector: pcWV-SPORT6; Site_1: Not1;
Site_2: Sali; Cloned unidirectionally. Primer: Oligo dT
Average insert size 2.1 kb.
a 310 c 298 g 274 t
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/db_xref="taxon:9606"
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1 (bases 1 to 920)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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     Conservative
                                                                                                                                                                 /note-Torgan: brain; Vector: pCMVSPORT 6: 1st strand cDNA was primed with a Noti-oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library is not normalized, but is the control for the normalized libraries. Library was constructed by Life Technologies. Contact: Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax: (1) 301 610 8371 Email:
                                                                                                                       http://fulllength.invitrogen.com"
a 218 c 247 g 231 t 1
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/lab_host="DH10B"
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                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC//CTD/DTP
Tissue Procurement: ATCC//CTD/DTP
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                        http://image.llnl.gov
Plate: LLCM1414 row: n column: 04
High quality sequence stop: 792.
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Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        602525515F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4643907
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/db_clone="ImAGE:4643907"
/clone="ImAGE:4643907"
/clone_lib="NHL_MGC_20"
/tissue_type="melanotic melanoma"
/lab_host="DH10B (phage-resistant)"
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                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 743)
                                                                                                                                                                                                                                                                                                                                  BE408507 743 bp mRNA linear EST 21-JUL-2000 601303024F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3637852 5',
                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                               Unpublished (1999)
Contact: Robert Strausberg, Ph.D
                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mamumalian Gene Collection (MGC)
                                                                                                                                                                                                                   Homo sapiens
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                                                                                                                                                                                                                                                                             BE408507.1
                                                                                                                                                                                                                                                                                              mRNA sequence.
BE408507
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    CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (
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GI:9344957

(LLNI)

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532 CGATCATGATTTACTGGATTG 552
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                                                  481 CGAT-ATGATTTACTGGATTG 500
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov plate: LLCM337 row: o column: 05 High quality sequence stop: 625.
           AL553746 LTI_NFL006_PL2 Homo sapiens cDNA clone CS0DI080YF09 prime, mRNA sequence.
AL553746
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AL553746.1 GI:12893867
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/clone_lib="NIH_MGC_21"
/tissue_type="choriocarcinoma"
/lab_host="DHIDB (chage-resistant)"
/lab_host="DHIDB (chage-resistant)"
/note="Organ: placenta; Vector: pOTB7; Site_1: XhoI;
/note="Organ: placenta; Vector: pOTB7; Site_sing the
placetionally cloned into EcoRI/XhoI sites using the
following 5; adaptor: GGCACGAG(G). Size-selected >500bp
for average insert size 1.8kb Library constructed by
Ling Hong in the laboratory of Gerald M. Rubin (University
of California, Berkeley) using ZAP-CDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
92 a 170 c 174 g 207 t
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Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
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/note="Vector: pCMVSPORT 6; Site_1: NotI; 1st strand cDNA
/note="Vector: pCMVSPORT 6; Site_1: NotI; 1st strand cDNA
vas primed with a NotI-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pCMVSPORT 6
vector. Library was normalized. Library was constructed by
Life Technologies. Contact : Feng Liang Life Technologies,
a division of Invitrogen 9800 Medical Center Drive
Rockville, Maryland 20850, USA Fax : (1) 301 610 8371
Email : fliang@lifetech.com URL :
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a 246 c 257 g 240 t
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Pred. No. 1.4e-140;
0; Mismatches 0;
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                                   301 ATGACGATGATCTTCAAGGAGTCATCCCCCAGCCAACCCCAACTCGTTGCCAACAAGACAAT
                                                                                                                                241 ATCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAAAAATGTTTCTGTG 300
                                                                                                                                                                                                                             318 AAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATCAAT 377
                                                                                                                                                                                                                                                                                                                                                              258 CGAATAATTACATCAGAGCTCTATCGATCACTGGGAGATGTCCTCCGTGATGTTGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       198 CAAATCAAAGAACATTTACTGAAGTCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CAAATCAAAGAACATTTACTGAAGTCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTT 120
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                                                                                                                                                                                                                                                                 AAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATCAAT 240
                                                                                            ATCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAAAAATGTTTCTGTG
Email: cgapbs-r@mail.nih.gov
Tissue procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLCM1204 row: f column: 03
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1. (bases 1 to 700)
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602243611F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4334594 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
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National Institutes of Health, Mammalian Gene Collection (MGC)
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/clone_lib="NIFLMGC_48"
/tissue_type="primary B-cells from tonsils (cell line)"
/lab_host="DH10B (phage-resistant)"
/lab_host="Pull B (phage-resistant)"
/lab_host="Pull B (phage-resistant)"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the place of the plac
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/db_xref="taxon:9606"
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Pred, No. 1.9e-140;
"Magnatches 1;
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421 CTCCGGCGTTTTGCATTTCCTCTGAGCCTGTTTCAGGGCAGTAGTGATGG-AGTGGAGGT 479
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                                                                                                                       137 GAATTCCTGACTGCCACAGGTGTACAGGAAACATTTGTCTTTTGTTGCTGGAAAGCTGCT 196
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: ggapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
CDNA Sequencing by: Incyte Genomics, Inc.
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
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Plate: LLCM1624 row: f column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
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NIH-MGC http:/
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                                                                                                                                                                                                                                                                             Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                 /tisue_type="primary B-cells from tonsils (cell line)"
/lab_host="DHIOB (phage-resistant)"
/note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally clomed into EcoRI/KhoI sites using the
following 5' adaptor: GGCACGAG(G), Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NH_MGC Library."
66 a 172 c 167 g 185 t
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/db_xref="taxon:9606"
/clone="IMAGE:4765463"
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                                                                                                                                                                                                                                                                          Score 486.4; DB 10;
Pred. No. 3.9e-140;
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1 (bases 1 to 887)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA sequence
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Plate: LLAM11491 row: p column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
Cound through the I.M.A.G.E. Consortium/LLNL at:
               /note-*Organ: brain; vector: pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed); RNA source anonymous pool of 6 male brains, age range 23-27 yo. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.5 kb, insert size range 1-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 019. Note:
                                                                                                                                                                                                    /clone="IMAGE:5196551"
/clone_lib="NIH_MGC_114"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
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            Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: ATC/DCTD/DTP
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Library Preparation: Ling Hong/Rubin Laboratory
CDNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLCML290 row: j column: 04
High quality sequence stop: 598.
Location/Qualifiers
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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BG333881.1 GI:13140319
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/db_xref="taxon:9606"
/clone=_lib="NAGE_4756955"
/clone=_lib="NIH_MGC_20"
/tissue_type="melanotic melanoma"
/lab_host="DHIDB (phage resistant)"
/note="Organ: skin: Vector: pOTB7; Site_1: xhoI; Site_2:
FCORI; CDNA made by Oligo-dT priming. Directionally
cloned into EcoRI/XhoI sites using the following 5'
adaptor: GGCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-CDNA synthesis kit
California, Berkeley) using ZAP-CDNA synthesis kit
California, and Superscript II RT (Life Technologies)."
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Pred. No. 1.2e-139;
0; Mismatches 0;
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Search completed: October 10, 2002, 20:27:49 Job time: 702.733 secs

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Title:
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10107.424 Million cell updates/sec
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AAI69735 AAS92572	AAC79952	ABL26428	ABL26429	AAT62551	AAT04133	AAI93960	ABA89022	ABA15345	ABA15344	ABA03787	AAX90855	ABA89030	AAL17265	AAL09376	AAK85314	ABL15542	ABL15550	AAS97010	AAH10947	AAI96719	ABL17884	ABL04958	ABL04959	AAL05000	ABA18681	ABL10434	AAF21608	AAA81520	ABA83052	AAF26310	AAI63294	AAI98944	AAF26953	ABL06328
Human retinoblasto DNA encoding novel	Human secreted pro	Drosophila melanog	Drosophila melanog	Interleukin-l rece	Helicobacter pylor	Human neuroblastom	Escherichia coli p	Human nervous syst	Human nervous syst	Human peroxisome f	cDNA clone PL776_6	Escherichia coli p	Human breast cance	Human breast cance	Human immune/haema		Drosophila melanog		Human cDNA clone (	Human neuroblastom	Drosophila melanog	Drosophila melanog	Drosophila melanog	Human reproductive	Human nervous syst	Drosophila melanog	isseria mening	N. meningitidis pa	Human transcriptio			Human excretory re	m	Drosophila melanog

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## ALIGNMENTS

## RESULT 1 AAD11116 Human small cell lung cancer associated gene, eIF2B. 24-SEP-2001 (first entry) AAD11116; AAD11116 standard; DNA; 2291 BP

Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; eukaryotic translation initiation factor; eIF2B; 21-JAN-2000; 2000US-0489101. 26-JUL-2001. Homo sapiens. synovial sarcoma; cytostatic; ds. (LUDW-) LUDWIG INST CANCER RES (SLOK ) SLOAN KETTERING INST C. (CORR ) CORNELL RES FOUND INC. 19-JAN-2001; 2001WO-US02015 WO200153349-A2. CANCER RES.

ABL06740

WPI; 2001-457597/49 Stockert E, Scanlan MJ,

Jager D,

01d LJ,

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, helmowar colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a DNA encoding human eukaryotic translation initiation factor eIF2B. This small cell lung cancer associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encode isolated nucleic acid comprising an NA Group 3 or 4 molecule
                 22-OCT-2001
                                                                                   AAI58623 standard; cDNA; 2907
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               (first entry)
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25-APR-2000;
09-JUL-2000;
                                                                                                                                                                                                                                                              Sequence 2907 BP; 734 A; 703 C; 810 G; 653 T; 7 other;
                                                                                                                                                                                                                                                                                                 specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; SEQ ID NO 826; 10078pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries -
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03-AUG-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human polynucleotide SEQ ID NO 826.
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                                                659 CAAATCAAAGAACATTTACTGAAGTGAAGTGGTGCTGCCCCTACATCTCTCAATGTGGTT
             121 CGAATAATTACATCAGAGCTCTATCGATCACTGGGAGATGTCCTCCGTGATGTTGATGCC
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                                                                                                                       GAATTCCTGACTGCCACAGGTGTACAGGAAACATTTGTCTTTTGTTGCTGGAAAGCTGCT 658
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DB; AAM39467.
The sequence data for this patent did not form part of the printed
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                                                                                                                                                                                                           Similarity
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Wang Z,
Zhou P,
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2000US-0552317
2000US-0558042
2000US-0620312
2000US-0620312
2000US-0653450
2000US-0662191
2000US-0662191
2000US-0693036
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Wehrman T, X
Goodrich R,
                                                                                                                                                                                          100.0%; Score 500; DB 22; 100.0%; Pred. No. 3.7e-159; tive 0; Mismatches 0;
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Xu C, Xue AJ,
R, Drmanac RT;
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Yang Y,
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09-JUL-2000; 2000US-0598042.
19-JUL-2000; 2000US-0620312.
03-AUG-2000; 2000US-0653450.
14-SEP-2000; 2000US-0662191.
19-OCT-2000; 2000US-0693036.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; peripheral nivous system; neuropathy; central nervous system; CNS; Alzheimer's; parkinson's disease; Huntington's disease; hemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human polynucleotide SEQ ID NO 4398.
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                                                                                                                                                                                                                                                                                 21-JAN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAI60409 standard;
           Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries -
                                                    P-PSDB; AAM41253
                                                                                                                                                                                                                                                                                                             26-DEC-2000; 2000WO-US34263
                                                                                                                                                                                                                                                                                                                                                                      WO200153312-A1
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                                                                WPI; 2001-442253/47.
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                                                                                           QA,
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                                                                                                         Wang 2,
                                                                                           Zhou P,
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Wehrman T,
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                                                                                             Goodrich R, Drmanac
                                                                                                        Chen R, Ma Y, Xu C, Xue AJ,
                                                                                                        Qian XB,
Yang Y,
                                                                                                                       Ren F,
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                                                                                                                       Wang
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CC Activin/inhibin activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and CC c.N.S disorders.
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Tocal Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2968 BP; 728 A; 719 C; 825 G; 696 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specification.
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CGATATGATTTACTGGATTG 761
                   CGATATGATTTACTGGATTG 500
                                                                                                CTCCGGCGTTTTGCATTTCCTCTGAGCCTGTTTCAGGGCAGTAGTGATGGAGTGGAGGTT 480
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                                                                           CTCCGGCGTTTTGCATTTCCTCTGAGCCTGTTTCAGGGCAGTAGTGATGGAGTGGAGGTT
                                                                                                                                                        GTGGTAGTGGCTGTGGATAGTACCACAAACAGGGTTCTCCATTTTCAGAAGACCCAGGGT
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Human ovarian and breast cancer associated polynucleotide SEQ ID NO 856 Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral;

ABA08061; 11-JAN-2002

(first entry)

ABA08061 standard; DNA; 2898

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antiallergic; hepatot vulnerary; anticonvul cardiant; gene therap neurological disease; Homo sapiens.  W0200155325-A2.  02-AUG-2001; 2001WO-U 17-JAN-2000; 2000US-0 16-ABR-2000; 2000US-0 17-WAR-2000;
jc, hepatotropic, antidiabetic antiinflammatory; antivocry; antivocry; antivocry; antivocry; antivocry; antivocry; antivocry; antivocry; antiparasitic; gene therapy; cancer; immune disorder; cardiovascular disorder; al disease; infection; human; secreted protein; ds.  255-A2.  11.  20010S-0179065. 2000US-018464. 2000US-018464. 2000US-018464. 2000US-018464. 2000US-018464. 2000US-018464. 2000US-018468. 2000US-
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2000US -0234234 2000US -0234294 2000US -0234997 2000US -0235834 2000US -0235834 2000US -0235836 2000US -0236368 2000US -0236368 2000US -0236368 2000US -0236368 2000US -0236368 2000US -0236369 2000US -0236369 2000US -0237039 2000US -0237039 2000US -0237038 2000US -02341786 2000US -0241786 2000US -0241786 2000US -0241786 2000US -0241786 2000US -0246477 2000US -0246477 2000US -0246477 2000US -0246477 2000US -0246477 2000US -0246611 2000US -0246611 2000US -0246611 2000US -0246526 2000US -0246611 2000US -0246526 2000US -0246611 2000US -0246526 2000US -0246211 2000US -0246211 2000US -0249211 2000US -0249211 2000US -0249211 2000US -0249214 2000US -0249216 2000US -0249216 2000US -0249216 2000US -0249216 2000US -0249216 2000US -0249216 2000US -0249265 2000US -0249265 2000US -0249265 2000US -0249265 2000US -0249265 2000US -0249265 2000US -0249265 2000US -0249265 2000US -0249265 2000US -0251988 2000US -02511868 2000US -02511868 2000US -02511868

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Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at fip.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated ovarian and/or breast cancer related nucleic acids and polypeptides, useful for diagnosing, treating and/or preventing human diseases and disorders, particularly ovarian and/or breast cancer -
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11-DEC-2000; 2000US-0254097.
05-JAN-2001; 2001US-0259678.
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                                        76 TTACTGAAGTCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTTCGAATAATTACATCA 135
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 857; 577pp + Sequence Listing; English.
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404 TGAGACTGCTTTTTTGCAGTTCTGTCCCTCCTGTCCTTTATAGGTTGAGACGGAAGCTAG 345
                                                                                                                                                                                                                                                   524 TCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATCAATATCACCAGAGCCCTT
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7 standard; DNA; 2898 BP.  2001 (first entry)  2001 (first entry)  reproductive system related antigen DNA SEQ ID NO: 9475.  reproductive system related antigen; reproductive system disorder; gene therapy; ds.  plans.  2001, 2001WO-US01339.  2001, 2000WS-0139658.  2000, 2000WS-0184664.  2000, 2000WS-0184664.  2000, 2000WS-0184667.  2000, 2000WS-0184667.  2000, 2000WS-0216667.  2000, 2000WS-0216667.  2000, 2000WS-0216667.  2000, 2000WS-0216667.  2000, 2000WS-0216667.  2000, 2000WS-0216667.  2000, 2000WS-0217467.  2000, 2000WS-0218859.  2000, 2000WS-0218859.  2000, 2000WS-0218859.  2000, 2000WS-0217467.  2000, 200WS-0217467.  200	AAAAAAATGTTTCTGTGATGACGATGATCTTCAAGGAGTCATCCCCAACTC 343 [
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17-NOV-2000;
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17-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2898 BP; 796 A; 744 C; 600 G; 758 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention provides the protein and coding sequences of a number of human reproductive system related antigens. These can be used in the prevention and treatment of reproductive system disorders, including cancer. The present sequence is a genomic sequence encoding a protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO 9475; 1297pp + Sequence Listing; English.
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                                                                                                                                                                                                                                                                                                                             76 TTACTGAAGTCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTTCGAATAATTACATCA 135
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  344 GTTGCCACGAAGACAATGTGGTAGTGGCTGTGGATAGTACCACAAACAGGGTTCTCCATT
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                                                                                                             404 TGAGACTGCTTTTTTGCAGTTCTGTCCCTCCTGTCCTTTATAGGTTGAGACGGAAGCTAG 345
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                                                                                                                                                                                                                                                            TCTGACTTTCTTGGTGTATGGGGATGTCATCTCAAACATCAATATCACCAGAGCCCTT 465
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20000S-0251868.
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20000S-0251989.
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Pred. No. 2.8e
0; Mismatches
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-has 3; Indels
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04-FEB-2000;
24-FEB-2000;
02-MAR-2000;
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08-SEP-2000; 08-SEP-2000; 12-SEP-2000; 14-SEP-2000; 14-SEP-2000; 14-SEP-2000;

2000US-0231243 2000US-0231244 2000US-0231414 2000US-0231414 2000US-0231414 2000US-0232081 2000US-023299 2000US-0232397 2000US-0232399 2000US-0232399 2000US-0232400 2000US-0232401 2000US-0232401 2000US-0232401 2000US-0234240 2000US-0234240 2000US-023424 2000US-0234494 2000US-023423 2000US-023423 2000US-023423 2000US-023423 2000US-023423 2000US-023423 2000US-0234844 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883 2000US-0235883

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 9476; 1297pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isolated nucleic acid molecule encoding a reproductive system antigen is used in preventing, treating or ameliorating a medical condition
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             404 TTCAGAAGACCCAGGGTCTCCGGCGTTTTGCATTTCCTCTG 444
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                                                                                                                                                                                                                                                                                              TCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATCAATATCACCAGAGCCCTT
                                       GTTGCCACGAAGACAATGTGGTAGTGGCTGTGGATAGTACCACAAACAGGGTTCTCCATT
                                                                                                                                                                                                                                                                                                                                                              TTACTGAAGTCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTTCGAATAATTACATCA 135
                                                  GTTGCCACGAAGACAATGTGGTAGTGGCTGTGGATAGTACCACAAACAGGGTTCTCCATT 403
                                                                                                                                         TGAGACTGCTTTTTTGCAGTTCTGTCCCTCCTGTCCTTTATAGGTTGAGACGGAAGCTAG
                                                                                                                                                                                            GAGGAACACAGGTCAGGATGGGAAAATGACAGGGAACAAGGGTTAAAGACCAGCAGAGCCC
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Barash SC,
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2000US-0249264.
2000US-0249265.
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2000US-0249297.
2000US-0249299.
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2001US-0259678
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Pred. No. 2.8
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2000US-0237037. 2000US-0237038. 2000US-0237039.

2000US-0236368. 2000US-0236369. 2000US-0236370. 2000US-0236802.

17-NOV-2000; 17-NOV-2000;

2000US-0249210 2000US-0249211. 2000US-0249212. 2000US-0249213. 2000US-0249213. 2000US-0249214. 2000US-0249216. 2000US-0249216. 2000US-0249216.

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                                                                                                                                                                                                                                                                                                                                                                     (ABB57737-ABB72072).

The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                          Sequence 2010 BP; 463 A; 548 C; 596 G; 403 T; 0 other;
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11-JUL-2000; 2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID NO 14705; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cel
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                                                                    382 GATCTGCGCCCAGTGCTGGAGCAGCACAAGCGGCAGGCCAAGTTCGACAA 431
                                                                                                                                      322 AATAAGGCGCTGATCCGTGGCCACTTCATTCTGCTCGGCGCCGATACGGTGACCAATGCC
                                                                                                                                                                   178 GCCAAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATC 237
                                                                                                                                                                                                                                       118 GTTCGAATAATTACATCAGAGCTCTATCGATCACTGGGAGATGTCCTCCGTGATGTTGAT 177
                                                                                                   238 AATATCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAA 287
                                                                                                                                                                                                      262 GTCCATGTGATTGGCGGCGAGGGTTGTCGCTGCTTCGGCGATGCCATGCGTGATTTGGAC 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     224 TTCAGAAGACCCAGGGTCTCCGGCGTTTTGCATTTCCTCTG 184
                                                                                                                                                                                                                                                                                           POCST
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                                                                                                                                                                                                                                                                        88;
                                                                                                                                                                                                                                                                                       7.8%;
Similarity 51.8%;
                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              developmental biology; cell signalling; insecticide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PWD,
                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                       Score 38.8; DB 23;
Pred. No. 0.023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Myers EW;
                                                                                                                                                                                                                                                                        82; Indels
                                                                                                                                                                                                                                                                                                       Length 2010;
                                                                                                                                                                                                                                                                        0;
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Best Local
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CABB57737-ABB72072).
26-MAR-2002
                                 ABL06328;
                                                                  ABL06328 standard; cDNA; 6162 BP
                                                                                                                                                                                                                                                                                         2875 GTCCATGTGATTGGCGGCGAGGGTTGTCGCTGCTTCGGCGATGCCATGCGTGATTTGGAC 2816
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 4272 BP; 1069 A; 1157 C; 1092 G; 954 T; 0 other;
                                                                                                                                                   2755 GATCTGCGCCCAGTGCTGGAGCAGCACAAGCGGCAGGCCAAGTTCGACAA 2706
                                                                                                                                                                                                                       2815 AATAAGGCGCTGATCCGTGGCCACTTCATTCTGCTCGGCGCCGATACGGTGACCAATGCC 2756
                                                                                                                                                                                                                                                                                                                                                                                                                                                               at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID NO 14702; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB; ABB62637
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (PEKE ) PE CORP NY.
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11-JUL-2000; 2000US-0614150
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pharmaceutical;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster expressed polynucleotide SEQ ID NO 14702.
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                                                                                                                                                                                                                                                                                                             118 GTTCGAATAATTACATCAGAGCTCTATCGATCACTGGGAGATGTCCTCCCGTGATGTTGAT 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      interactions -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-SEP-2001
                                                                                                                                                                                                                                           178 GCCAAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATC 237
                                                                                                                                                                                  238 AATATCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAA 287
                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                            88;
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                                                                                                                                                                                                                                                                                                                                                            Conservative
(first entry)
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                                                                                                                                                                                                                                                                                                                                                                         7.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Li PWD,
                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                         Score 38.8; DB Pred. No. 0.034;
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                                                                                                                                                                                                                                                                                                                                                                                           DB 23; Length 4272;
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RESULT 11
AAF26953/c
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AC AAF2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG01840-ABLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; SEQ ID NO 13466; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell interactions -
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11-JUL-2000; 2000US-0614150
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Human; cancer associated antigen precursor; cancer associated antigen; seminoma; HLA; human leukocyte antigen; cytostatic; gene therapy;
                                                                         Human cancer associated antigen precursor HOM-TES-84/6 cDNA SEQ ID NO:5
                                                                                                                                 10-APR-2001
                                                                                                                                                                                                                               AAF26953 standard; cDNA; 3635 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 6162 BP; 1591 A; 1658 C; 1564 G; 1349 T; 0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (PEKE ) PE CORP NY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Drosophila; developmental biology; cell signalling; insecticide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ABB57737-ABB72072)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      178 GCCAAGGCTTTGGTGCGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATC 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        422 GTCCATGTGATTGGCGGCGAGGGTTGTCGCTGCTTCGGCGATGCCATGCGTGATTTGGAC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118 GTTCGAATAATTACATCAGAGCTCTATCGATCACTGGGAGATGTCCTCCGTGATGTTGAT 177
                                                                                                                                                                                                                                                                                                                                                                302 GATCTGCGCCCAGTGCTGGAGCAGCACAAGCGGCAGGCCAAGTTCGACAA 253
                                                                                                                                                                                                                                                                                                                                                                                                               238 AATATCACCAGAGCCCTTGAGGAACACAGGTTGAGACGGAAGCTAGAAAA 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362 AATAAGGCGCTGATCCGTGGCCACTTCATTCTGCTCGGCGCCGATACGGTGACCAATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                              (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 38.8; DB Pred. No. 0.041;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Myers EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 23; Length 6162;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes a method for diagnosing a disorder characterised by expression of a human cancer associated antigen (CAA) precursor (I) coded by a NA Group I nucleic acid molecule (NI) comprising contacting the biological sample with an agent (A) that specifically binds to NI, (I) or its fragment, complexed with an human leukocyte antigen (HLA) molecule and determining the interaction between the agent and NI or (I). (I) has cytostatic activity and can be used in gene therapy and vaccine production. The method can be used for treating a subject with a condition characterised by expression of (I) in cells of a subject. The present sequence which is used in the exemplification of the production of the present sequence which is used in the exemplification of
                                                                                                Human; nootropic; neuroprotective; cytostatic; dermatological; virucide; immunosuppressive; antinflammatory; anti-HIV; antibacterial; vulnerary; antiparkinsonian; antisickling; antianaemic; antiarthritic; cancer; antipheumatic; hepatotropic; cerebroprotective; antinflammatory; antiallergic; antidiabetic; antiuleer; anticonvulsant; antiqual; antiparasitic; cardiant; Immune disorder; cardiovascular disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Diagnosing a disorder characterized by expression of a human cancer associated antigen precursor, comprises detecting interaction of an associated antigen precursor actions of the antigen precursor with a nucleic acid molecule encoding the antigen precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3635 BP; 1162 A; 741 C; 797 G; 935 T; 0 other;
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  Homo sapiens
                                         antiparasitic; cardiant; immune disorder; cardiovascular disorder; neurological disease; infection; nephrotropic; gene therapy; vaccine; excretory system; ds.
                                                                                                                                                                                                                                                                                 Human excretory related polynucleotide SEQ ID NO 708.
                                                                                                                                                                                                                                                                                                                                     07-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                          AAI98944;
                                                                                                                                                                                                                                                                                                                                                                                                                                            AAI98944 standard; DNA; 18301 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 48; Page 90-91; 126pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              559 TGTCTAAGGACCACACTTCTAATGTTGCTCAGCTGAAAAATTCTTATAAATTTTCCA 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81 GAAGTCAAAGTGGTGCCGCCCTACATCTCTCAATGTGGTTCGAATAATTACATCAGAGCT 140
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PR	יים ממק	P R	PR:	Rd Rd	PR	PR	PR R	PR	PR R	PR	אַר אָקר	PR	PR	קר א	PR	PR	ים א ש	PR	PR	מק	PR	PR	בי גע	PR	PR	PR	PR	g q	PR	מי א	Rq	יי א לא	PR	אַר אַר	PR	אַר אַר	PR	PR	PR	P R	PR	PR	g g	XX P	XX Cg	XX	X
SEP-2000; SEP-2000;	25-SEP-2000; 25-SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	SEP-2000;	AUG-2000;	3-AUG-2000;	AUG-2000;	2-AUG-2000;	14-AUG-2000;	AUG-2000;	14-AUG-2000;	AUG-2000;	-2000;	AUG-2000;	AUG-2000;	AUG-2000;	AUG-2000;	-2000;	-JUL-2000;	000;	JUL-2000;	000;	8-JUN-2000;	19-MAY-2000; 07-JUN-2000;	-APR-2000;	17-MAR-2000;	2-MAR-2000;	-2000;	1-JAN-2000;	17-JAN-2001;	02-AUG-2001.	MOZOCTOCOTO - MA	10000165113
2000US-0235484. 2000US-0235834.	2000US-0234274. 2000US-0234997. 2000US-0234998.	2000US-0234023.	2000US-0233064.	2000US-0232401.	2000US-0232399. 2000US-0232400.	2000US-0232398.	2000US-0231968.	2000US-0232081.	2000US-0231414.	2000US-0231413.	2000US-0231244.	200005-0231242.	200008-0230438.	200008-0229513.	2000US-0229509.	2000US-0229345.	200005-0229343.	2000US-0229287.	2000US-0228924.	200005-0227182, 200005-0227009	2000US-0226868.	2000US-0226681.	2000US-0225759. 2000US-0226279.	2000US-0225758.	2000US-0225757.	200005-0225270.	2000US-0225268.	2000US-0225266.	2000US-0225214.	2000US-0224519. 2000US-0225213.	200005-0224518.	2000US-0220964.	200005-0218290.	2000US-0217487. 2000US-0217496.	2000US-0216880.	2000US-0215135. 2000US-0216647.	2000US-0214886.	2000US-0205515. 2000US-0209467.	2000US-0198123.	2000US-0189874. 2000US-0190076.	2000US-0186350.	2000US-0184664.	2000US-0179065.	2001WO-US01323.		14.	
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N GENOME SCI INC.	2000US-0254097. 2001US-0259678.	20000S-0251989. 20000S-0251990.	2000US-0251869.	856	2000US-0256719.	988	391	160	299	297	200 700 700 700 700	245	244	217	216	215	213	212	211	209	208	207	611	610	500	528	527	525	524	178	2000US-0246477.	475	474	828	809	787	2000US-0241786.	2000US-0241221.	2000US-0240960.	2000US-0239935.	2000US-0237040.	2000US-0237038.	2000US-0237037.	2000US-0236370.	200005-0236368.	200005-0236327.	2000US-0235836.

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ID AA1632
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AC AA1632
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to novel excretory system related human CC polynucleotides (AA198567-AA199590) and the encoded proteins CC (AAM99594-AAM99913) useful for preventing, treating or ameliorating CC disorders related to the excretory system. The genes are isolated CC from a range of human tissues disclosed in the specification. The Ct the diagnosis, treatment and prevention of: (a) cancer, e.g. breast CC and ovarian cancer and other cancers of the adrenal gland, bone, bone CC marrow, breast, gastrointestinal tract, liver, lung, or urogenital; CC (b) immune disorders e.g. Addison's disease, autoimmune charactive CC disease, multiple sclerosis, rheumatoid arthritis and ulcerative CC colitis, (c) cardiovascular disorders such as myocardial ischaemias; CC (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and cepilepsy; and (f) infectious diseases such as viral, bacterial, fungal CC and parasitic infectious diseases such as viral, bacterial, fungal CC mothers and contents and con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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Best Local
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  31-JAN-2000; 2000US-0179065
04-FEB-2000; 2000US-0180628
                                                                                                                                                                                                                                                                                                                                          Human; kidney antigen; immunosuppressive; antiarthritic; antirheumatic; antiproliferative; cytostatic; cardiant; vasotropic; cerebroprotective; nootropic; neuroprotective; antibacterial; virucide; fungicide; opthalmological; antiallergic; hepatotropic; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA163294 standard; DNA; 18301 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 18301 BP; 5076 A; 4392 C; 3842 G; 4991 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolated nucleic acid molecule encoding excretory system antigen is
                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                        gene therapy; cancer;
neurological disease;
                                                                                                                                                                                                                                                                                              antiinflammatory; antiulcer; vulnerary; anticonvulsant; antip
gene therapy; cancer; immune disorder; cardiovascular disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human kidney related polynucleotide SEQ ID NO 609.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-OCT-2001 (first entry)
                                                                          17-JAN-2001; 2001WO-US01343.
                                                                                                                                                                          WO200155323-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193 CGCTCTGACTTTCTTCTGGTGTATGGGGATGTCATCTCAAACATCAATATCACCAGAGC 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 198 TCCGGGCTTCATAGTTCTTTGTAATATGTTGAAGTTAATTTGAATTGAACTGATTTTGTTG 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                133 TCAGAGCTCTATCGATCACTGGGAGATGTCCTCCGTGATGTTGATGCCAAGGCTTTGGTG 192
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Similarity 54.6%;
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                                                                                                                                                                                                                                                                          infection; ds.
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     14-AUG-2000
14-AUG-2000
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22-AUG-2000
23-AUG-2000
30-AUG-2000
01-SEP-2000
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19-MAY-2000;
07-JUN-2000;
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08-SEP-2000;
12-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
29-SEP-2000;
02-OCT-2000;
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27-SEP-2000;
27-SEP-2000;
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25-SEP-2000;
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17-MAR-2000;
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2000US-0186350.
2000US-0189874.
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2000US-0215135.
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2000US-0205515.
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2000US-0224518.
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2000US-0220963.
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2000US-0231243.
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2000US-0232399.
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A RAGAR STORE TO A RAGAR STORE OF THE STORE                    Disclosure; SEQ ID NO 609; 564pp + Sequence Listing; English.
                                                               New isolated nucleic acids and polypeptides, useful for diagnosing, treating and/or preventing human diseases and disorders - \ 
                                                                                                                                      WPI; 2001-488784/53.
                                                                                                                                                                                                                              (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-NOV-2000;
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2000US-0249217
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                                                                                                                                                                                 Ruben SM;
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AAF26310/c
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(AA162971-AA163793) and the encoded polypeptides (AAM42417-AAM42691)

(C) collectively known as kidney antigens and the use of such kidney antigens

(C) detecting disorders of the kidney, especially kidney cancer and

(C) kidney cancer metastases. The polynucleotides and proteins are also

(C) useful for preventing, treating or ameliorating medical conditions

(C) useful for preventing, treating or ameliorating medical conditions

(C) treatment and prevention of the specification. The nucleic acids,

(C) treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer,

(C) and other cancers of the adrenal gland, bone, bone marrow, breast,

(C) gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders

(c) e.g. Addison's disease, allergies, autoimmune haemolytic anaemia,

(C) cutoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple

(C) cardiovascular disorders such as mycoardial ischaemias; (d) wound

(d) healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy;

(d) cardiovascular disorders such as viral, bacterial, fungal and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                    WPI; 2001-182785/18
                                                                                        Fraser CM,
Timmis KN,
                                                                                                                                                                                                                                                                                                                                           21-JUL-2000; 2000WO-EP07001
                                                                                                                                                                                                                                                                                                                                                                                        01-FEB-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200107588-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nodulation factor; transgenic plant; growth promoter; plant yield; development promoter; Lequminosae; root formation; ORF00968; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF26310;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF26310 standard; DNA; 936 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 18301 BP; 5076 A; 4392 C; 3842 G; 4991 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             parasitic infections.
Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                    Peterson J;
                                                                                                                                                                              (QIAG-) QIAGEN GMBH.
(GBFB ) GES BIOTECHNOLOGISCHE FORSCHUNG MBH.
(DKFZ-) DKFZ DEUT KREBSFORSCHUNGSZENTRUM.
                                                                                                                                                                                                                                                                                                23-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pseudomonas sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pseudomonas sp nodulation factor encoding DNA ORF00968.
                                                                                                                                                          (MEDI-) MEDIZINISCHE HOCHSCHULE HANNOVER.
                                                                                                                                                                                                                                                (TIGR-) TIGR INST GENOMIC RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193 CGCTCTGACTTTCTGCGGTGTATGGGGATGTCATCTCAAACATCAATATCACCAGAGC 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      198 TCCGGGCTTCATAGTTCTTTGTAATATGTTGAAGTTAATTTGAATTGAATTTGTTG 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       133 TCAGAGCTCTATCGATCACTGGGAGATGTCCTCCGTGATGTTGATGCCAAGGCTTTGGTG 192
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                                                                                     Tuemmler B, Hoheisei
Moore E, Straetz M,
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                                                                                                                                                                                                                                                                                             99DE-1034718.
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                                                                                     Hoheisel J, Duesterhoeft A, raetz M, Heim S, Nelson K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 32.6; DI
Pred. No. 9.5;
0; Mismatches
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                                                                                                                                                                                                                                                                                                             Human; transcription factor; TRFX; cell proliferative disease; autoimmune disease; inflammation; neurological disease; developmental disorder; cancer; AIDS; infection; cytostatic; anti-HIV; neuroprotective; antiinflammatory; gene therapy; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                           Human transcription factor TRFX-79 coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABA83052 standard; DNA; 2187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 936 BP; 182 A; 293 C; 279 G; 182 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          particularly Leguminosae. The nodulation factors encoded by (I) promote root formation in plants and improve yield, particularly when grown on soil contaminated with xenobiotics injurious to plants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This invention describes novel DNA sequences (I) that express products having the biological function of nodulation factors. The invention also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 3a; Page 14; 16pp; German.
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  Hillman JL,
Azimzai Y,
                                                                                                                                                    13-MAR-2001; 2001WO-US08117
                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                           13-MAR-2000;
                                                               (INCY-) INCYTE GENOMICS INC.
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Similarity 52.2%;
  Baughn MR,
Bandman O,
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                                                                                                           2000US-0188986.
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Yue H,
Tang YT,
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Pred. No. 2.3;
0; Mismatches 66;
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Mathur
  Lu DAM,
P, Shal
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  Patterson C;
P, Au-Young
  Au-Young J;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is the coding sequence for a human transcription factor. The transcription factor and its coding sequence are useful in the diagnosis, treatment and prevention of diseases associated with altered expression of the transcription factor e.g. cell proliferative, autoimmune/inflammatory, neurological and developmental disorders. A number of specific disorders/diseases are given in the specification, including associated with the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel transcription factor polypeptides, used to treat diseases associated with altered activity and expression of TRFX, and to for agents capable of modulating its activity - {\sf TRFX}
                                                                                                                                                                                                                                                                                                                                                                  Sequence 2187 BP; 386 A; 697 C; 737 G; 367 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 11;
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P-PSDB; ABB50228.
                                                                                                                                       438 TCCTCTGAGCCTGTTTCAGGGCAGTAGTGATGGAGTGGAGG 478
                                                                                                                                                                                  788 TGGCAGCACCTCCAGGGTGCTCAGCTCTGAGAAGCCGCCGCGCGCTGCCAGCGCCTGGCATG 729
                                                                                                                                                                                                                             378 TAGTACCACAAACAGGGTTCTCCATTTTCAGAAGACCCAGGGTCTCCGGCGTTTTGCATT 437
                                                                                          TGCGTTGCACCTGCTCGATGCACGGTGAGAAGGAGCAGAAG
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57.48;
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Pred. No. 4.2;
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re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
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Match
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1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/FCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/Dackfiles1.seq:*
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Gapop 10.0 , Gapext 1.0
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Maximum Match 100%
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Copyright (c) 1993 - 2002 Compugen Ltd.
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US-09-907-484-1
US-09-309-682-1
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US-09-262-773-210
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Sequence 14, Appli Sequence 1, Appli Sequence 1, Appli Sequence 19, Appli Sequence 11, Appli Sequence 11, Appli Sequence 159, Appli Sequence 7, Appli Sequence 7, Appli Sequence 7, Appli Sequence 7, Appli Sequence 1, Appli Sequence 206, Appli Sequence 206, Appli Sequence 207, Appli Sequence 207, Appli Sequence 208, Appli Sequence 208, Appli Sequence 210, Appli Sequence 11, Appli Sequence 1, Appli
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Patent No. 5670367
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,313
FILING DATE:
APPLICATION NUMBER: EP 91 114 300.6
FILING DATE: 26-AUG-1991
ATTORNEY/ACENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 30472/114 IMPERENCE/DOCKET                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 14: SEQUENCE CHARACTERISTICS: LENGTH: 7218 base pairs
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APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKURER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS;
CORRESPONDENCE ADDRESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                        IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 1800 Diago
CITY: Alexandria
STATE: VA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
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                                                                                                                                       STRANDEDNESS: TOPOLOGY: lin
                                                                                                                                                                                                                                     TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
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RESULT 2
US-08-346-849-1
                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNBER: 07/973,326
APPLICATION UNBER: 07/973,326
FILING DATE: 28 DECEMBER 1992
ATTORNEY/AGENT INFORMATION:
NAME: BFOOK, DAVId E.
REGISTRATION NUMBER: 22.592
REFERENCE/DOCKET NUMBER: MIT-6001
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6240
TELEFAX: (617) 861-6240
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/08346849 Patent No. 5670483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity Matches 17; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Rich, Alexander APPLICANT: Holmes, Todd TITLE OF INVENTION: STABLE TITLE OF INVENTION: SELF-AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1163 RRRRRRRRRRRRRRRR 1147
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                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         135 GTGGGAAGATGGTTTGAAGCTTTTGTTAAGAGGAGAAACAGAAATGCTTCTGCCTCTTTT 194
                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                STRANDEDNESS:
                                   TYPE: nucleic acid
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
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                                                    3083 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: HAMILTON, BROOK, SMITH & REYNOLDS, P.C. Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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linear
                  double
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80; Mismatches 120;
                                                                                                                                                                       MIT-6008
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Best Local Similarity
Matches 123; Conserv
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                                                                         INFORMATION FOR SEQ
                                                                                                          REGISTRATION NUMBER: 22,592
REFERENCE/DOCKET NUMBER: MIT-6008A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6240
                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 22-AUG-19
                               TELEFAX: (617) 861-9540
WFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 3083 base pairs
                                                                                                                                                                  FILING DATE: 28-DEC-1992
ATTORNEY/AGENT INFORMATION:
NAME: Brook, David E.
REGISTRATION NUMBER: 22/
                                                                                                                                                                                                                                            CLASSIFICATION: 435
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1550 ACTCATGATGCTAGAGACTGGAAAAACTGCCGATTTGTATGCTGCTATGGGTTTGTCTAAG 1609
                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 02173-4799
COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1670 TACCATCCAGACAAGCAATCTGCTGCTGGTGGTAGTTTGGACCAAG-----ATGGCTTT 1723
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LOCATION: 1292..29
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF SEQUENCES:
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5955343
              nucleic acid
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Lockshin, Curtis
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Rich, Alexander
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1292..2590
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                                                                                                                                                                                                                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                                                                                                                                                                      22-AUG-1994
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28-DEC-1992
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Pred. No. 1.6e-06;
0; Mismatches 92;
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US-08-961-810-19

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No. 6165713
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 19, Application US/08961810 Patent No. 6165713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                         TELEFAX: (503) 295-6679
TELEX: 360619
INFORMATION FOR SEQ ID NO: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: COMPOSITIONS AND METHODS RELATING TO DNA TITLE OF INVENTION: MISMATCH REPAIR GENES NUMBER OF SEQUENCES: 134
CORRESPONDENCE ADDRESS:
                               SEQUENCE CHARACTERISTICS:
LENGTH: 377 base pairs
TYPE: nucleic acid
                                                                                                                                                 REFERENCE/DOCKET NUMBER: OH TELECOMMUNICATION INFORMATION: TELEPHONE: (503) 224-6655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1724 TTCAAGATTATTCAAAAGGCCTTTGAAACTTTGACTGATTC 1764
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                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     456 TTCACTTGCATAACCTAAAGCTTATGAAAATGTTATCTGATCC 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              396 CATCACCCAGACAAACGGAAAGCAGCTGGTGAACCAATAAAAGAAGGAGATAATGACTAC 455
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                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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OTHER INFORMATION: /product= "zuotin"
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ADDRESSEE: Heuser
TOPOLOGY:
                STRANDEDNESS:
                                                                                                                                                                                                         NAME: Van Rysselberghe, REGISTRATION NUMBER: 3:
                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                           97204
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          U.S.A.
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Bronner, C. Eric
Baker, Sean M.
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linear
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                single
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                                                                                             19:
                                                                                                                                                                                                                            , Pierre C.
                                                                                                                                                                                      OHSU 306B
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US-08-352-902D-19/c
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GENERAL INFORMATION:
                                                                                                                                                              Matches
                                                                                                                                                                                                    Query Match
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INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 377 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422 TGGTGAACCAATAAAAGAAGGAGATAAT 449
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128 AAATAAAACCAAAAAACAGGTAAGTAAT 101
                                        422 TGGTGAACCAATAAAAGAAGGAGATAAT 449
                                                                                                                    362 GATCAAAGCAGCTCATAAAGCAATGGTTTTAAAACATCACCCAGACAAACGGAAAGCAGC 421
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                                                                              188 GATTCACACAGCCCACGAAGGAGTGGTTATGCAACATCTCCCGGAGAACTGCAAAACAAA 129
                                                                                                                                                                                Local Similarity
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CLASSIFICATION: <Unknown>
ATTORNEY_AGENT INFORMATION:
NAME: Van Rysselberghe, Pierre C.
REGISTRATION NUMBER: 33,557
REFERENCE_DOCKET NUMBER: 008U 306B
TELECOMMUNICATION INFORMATION:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kolodner, Richard D.
TITLE OF INVENTION: COMPOSITIONS AND METHODS RELATING TO DNA
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                                                                                                                                                                                                                                                                   SEQUENCE DESCRIPTION: SEQ ID NO: 19:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
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                                                                                                                                                              55;
                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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STATE: Oregon
                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (503) 224-669
TELEFAX: (503) 295-6679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/352,902D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 520 S.W. Yamhill Street, Suite 200
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Baker, Sean M.
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                                                                                                                                                                                  7.0%;
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62.5%;
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                                                                                                                                                                                Score 35.2; DB . Pred. No. 0.088;
                                                                                                                                                                                                  DB 4; Length 377;
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US-09-007-484-1

Sequence 1, Application Patent No. 6072032
GENERAL INFORMATION:

Application US/09007484

Black, Michael T.

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                                                                                                      Sequence 1, Application US/09309682
Patent No. 6214348
GENERAL INFORMATION:
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APPLICANT: Black, Michael T.
TITLE OF INVENTION: No. 6214348el Ftsy
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Dechert Price & Rhoads
STREET: 4000 Bell Atlantic Tower, 1717 Arch Stre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Black, Michae TITLE OF INVENTION: NO. NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Falk, Stephen T
REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: GM
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-994-2488
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APPLICATION NUMBER:
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MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                    314 TGCAGTTCTTGGAC 327
                                                                                                                                                                                                                                                                                                       273 AGAAGAATTACCAGAGGAAGAAGCTTGAGCACGAAGGAACTATAGAAGAAAATAATTC 332
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53.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               score 34.8; DB 3; Length 1293;
Pred. No. 0.25;
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                                                                                                                                                                                                                                                                                                                                              Sequence 159, Application US/08961083 Patent No. 6159469 GENERAL INFORMATION:
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                                COMPUTER: HP Vectra 486/33
OPERATING SYSTEM: MSDOS VEI
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/9
                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                        APPLICANT: Choi et. al.
TITLE OF INVENTION: Streptococcus pneumoniae Antigens and Vaccines
NUMBER OF SEQUENCES: 452
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LENGTH: 1293 base pair
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OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Diskett
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          213 TCAGGATTCAGAGCCAGCTGTAGGGGGTTTCTCAAGAAGAATAGAAGAATTACCAAACTC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254 GGAAGAGTTTCCCATGCTGAAAACACTTGATCCCAAAGACTGGAAGAACCAAGATCATTA 313
                                                                                                                                                                                                    STREET: 9410 Key
CITY: Rockville
STATE: Maryland
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REGISTRATION NUMBER: 36,795
REFERENCE/DOCKET NUMBER: GM
CLASSIFICATION: 435
                  FILING DATE:
                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: doub
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Philadelphia
                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/09/309,682
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72; Conserv
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                                                                                                                                                                                                                                3410 Key West Avenue
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                                                                                                                          Diskette, 3.50 inch, 1.4Mb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53.7%;
                                                                                                                                                                                                                                                          Genome Sciences, Inc
                                                                                      MSDOS version 6.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09/007,484
                                    US/08/961,083
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4; Length 1293;
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US-08-961-083-159
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4, Application US/08257073
Patent No. 5766597
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTURNAL, ...

NAME: Brookes, A. Anuct.
REGISTRATION NUMBER: 36,373
REFERENCE/DOCKET NUMBER: PB34
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION: 309-8504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                            OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/257,073
FILLING DATE: 09-JUN-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Paoletti, Enzo
APPLICANT: de Taisne, Charles
APPLICANT: Tine, John A.
                                APPLICATION NUMBER: US 08/075,783
FILING DATE: 11-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/852,305
FILING DATE: 18-MAR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: MALARIA RECOMBINANT POXVIRUS VACCINE NUMBER OF SEQUENCES: 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                              COMPUTER:
                                                                                                                                                                                                                                                                                                  MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                   STATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                             UNITED STATES OF AMERICA
                                                                                                                                                                                                                                                      E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
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US 07/672,183
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 34.6; DB 3; Pred. No. 0.36;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 7, Applicati Patent No. 6054296 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 25,506
REFERENCE/DOCKET NUMBER: 5.506
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 840-3333
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 20-MAR-1991
ATTORNEY/AGENT INFORMATION:
NAME: COOPER, IVER P.
REGISTRATION NUMBER: 28,005
REFERENCE/DOCKET NUMBER: BE
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: BROWDY AND NEIMARK
STREET: 419 SEVENTH STREET, N.W.
                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: BARBOUR ALAN G.
TITLE OF INVENTION: NEW 66 KDA ANTIGEN FROM BORRELIA
NUMBER OF SEQUENCES: 14
                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2172 AGAAGAAGAAGAATAGTACCAGAAAATTTGACAACTGAAGAATCAAAA 2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1932 TCAAGAAACGGAAGAAATGGAAAAACAAGTTGAAGCAATCACCAAGCAAATAGAAGC 1991
                                                                                     CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
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TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                      STREET: ***
CTTY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX:
                                                                                                                     APPLICATION NUMBER: FILING DATE: 20-JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX:
                                                                                                                                                                            SOFTWARE:
                                                                                                                                                                                                                                                                    ZIP:
                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                    20004
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                                                                                                                                                                             PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                               BERGSTROM SVEN
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                                                                                                                         20-JUN-1994
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                                                                                                                                         US/08/262,220
                                                                                                                                                                            Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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                                    BERGSTROM=3
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TELEX: 248633 INFORMATION FOR SEQ ID NO:

7:

SEQUENCE CHARACTERISTICS: LENGTH: 2547 base pair

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US-08-471-733-7/c

; Sequence 7, Application
; Patent No. 6068842
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: BERGSTROM SVEN
APPLICANT: BARBOUR ALAN G.
TITLE OF INVENTION: NEW 66 KDA ANTIGEN FROM BORRELIA
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/262,220
                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2355 AAAATTCAAGATGCTTATGAAAAGATTT 2328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2412 CCTGACA----GGTTTGCAAATGATCCTGTAAGGCAAAAAGATGCAAATGATAAATTTATT 2356
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                                                                   FILING DATE: 20-JUN-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
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ORIGINAL SOURCE:
TELECOMMUNICATION INFORMATION:
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STRAIN: Ip90
IMMEDIATE SOURCE:
CLONE: pJB-101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   402 CCAGACAAACGGAAAGCAGCTGGTGAACCAATAAAAGAAGGAGATAATGACTACTTCACT 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               342 TACAAGGCTACACAGAGACAGATCAAAGCAGCTCATAAAGCAATGGTTTTAAAACATCAC 401
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LOCATION:
                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: BROWDY AND NEIMARK STREET: 419 SEVENTH STREET, N.W. CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity nes 84; Conserv
                 REGISTRATION NUMBER: 28
REFERENCE/DOCKET NUMBER:
                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                             APPLICATION NUMBER:
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LOCATION:
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                                                    COOPER, IVER P.
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nucleic acid
DEDNESS: double
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443..2242
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380..442
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380..2245
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                                28,005
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Pred. No. 0.49;
0; Mismatches 61;
                 BERGSTROM=3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
             CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/26;
FILING DATE: 20-JUN-1994
ATTORNEY/AGENT INFORMATION:
NAME: COOPER, IVER P.
                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
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                                                                                                                                                                      COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                        APPLICANT: BERGSTROM SYEN
APPLICANT: BARBOUR ALAN G.
TITLE OF INVENTION: NEW 66 KDA ANTIGEN FROM BORRELIA
NUMBER OF SEQUENCES: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 2547 base pairs
TYPE: nucleic acid
                                                                                                                                            SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
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ORIGINAL SOURCE:
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IMMEDIATE SOURCE:
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LOCATION:
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REGISTRATION NUMBER:
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380..442
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28,005
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Pred. No. 0.49;
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US-08-750-494-7/c
; Sequence 7, Application US/08750494
; Patent No. 6204018
; GENERAL INFORMATION:
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Best Local Similarity
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SEQUENCE CHARACTERISTICS:
LENGTH: 2547 base pairs
                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/750,494
                                                                                                                                                                                                                                                                                 APPLICANT: BARBOUR ALAN G.
APPLICANT: BARBOUR ALAN G.
TITLE OF INVENTION: NEW 66 KDA ANTIGEN FROM BORRELIA
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSE: BROWDY AND NEIMARK
STREET: 419 SEVENTH STREET, N.W.
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                               FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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IMMEDIATE SOURCE:
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ATTORNEY/AGENT INFORMATION:
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LOCATION:
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LOCATION: 380..2245
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380..442
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INFORMATION FOR SEQ ID NO:
                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk, 3.
COMPUTER: IBM PC compatible
OPERATING SYSTEM: MS-DOS
                         SOFTWARE:
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                              APPLICANT: KANJI NAKAMURA
APPLICANT: HIYOSKI ISHIDA
TITLE OF INVENTION: GENE RECOMBINANT WITH BIODEGRADABILITY
TITLE OF INVENTION: FOR CHLORINATED ETHYLENE AND BIO-TREATMENT OF
TITLE OF INVENTION: CHLORINATED ETHYLENE THEREWITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: 202-628-5197
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IMMEDIATE SOURCE:
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ORIGINAL SOURCE:
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LENGTH: 2547 base pairs
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REGISTRATION NUMBER: 28,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                  CITY: Shinjuku-Ku
STATE: Tokyo
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FILING DATE:
                APPLICATION NUMBER:
                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                  ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
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                                                                                                                              ку: Japan
160-0023
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443..2242
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380..442
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                US/09/106,638
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Pred. No. 0.49;
0; Mismatches 61;
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                                                                                                 3.5 inches, 1.44Mb storage
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RESULT 15
US-08-681-129-1
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                                                            Sequence 1, Application US/08681129
Patent No. 5738854
GENERAL INFORMATION:
APPLICANT: Mettenleiter, Thomas Cristoph
TITLE OF INVENTION: Pseudorabies virus va
                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
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APPLICATION NUMBER: 174997/1997, Japan
FILING DATE: 30-June-1997
INFORMATION FOR SEQ ID NO: 1:
                            NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS
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NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 4800 base pairs
TYPE: nucleic acid
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APPLICATION NUMBER: 174996/1997, Japan
FILING DATE: 30-June-1997
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ORIGINAL SOURCE:
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                                                                                                                                                                                                              887 GCCTGCACCT 896
                                                                                                                                                                                                                                                                              827 GGCGCCAACATGAACAACTTCTATTGCGCCGACTACGGCTGGGGCACGGCCATCACCCAG 886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: peptide
LOCATION: 3301..3660
IDENTIFICATION METHOD:
OTHER INFORMATION: phe
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LOCATION: 127..345
IDENTIFICATION METHOD:
OTHER INFORMATION: ph
                                                                                                                                                                                                                                              96 GCTCTGACCT 105
                                                                                                                                                                                                                                                                                               36 GGCGCCATCATGCTGCTTCTGCCAAGCGCCCGGACGGCCGGGGCACCGCCATCACCCAC 95
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LOCATION: 3689..4756
IDENTIFICATION METHOD: E
OTHER INFORMATION: pheE of phenol-hydroxylase
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STREET:
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LOCATION: 1754..3268
IDENTIFICATION METHOD:
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LOCATION:
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LOCATION: 434..1429
IDENTIFICATION METHOD:
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                   ADDRESSEE:
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E: Organon Teknika Corporation
1330 Piccard Drive
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1440..1712
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                                                                 vaccine
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Search completed: October 10, 2002, 18:14:08 Job time: 31.7333 secs
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Best Local S
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Gormley, Mary E. REGISTRATION NUMBER: 34,409 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: I
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: EP 92.203.079.6 FILING DATE: 06-OCT-1992 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Rel
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
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LENGTH: 1578 base pairs
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                                                                                                                                                                                                                                                                           ORGANISM: For ORGANISM: Kaplan
                                                                   834 GGACGACGCCTCGGCCGCCGTGGTCGAGGCCGTGTCCGCCGTCGC 878
                                                                                                                                       774 GATGCTCTGCGACCTCGTGGCCGGGGCGGACGCCATCCTGCGGCGGGCCGCGGGCGCCTC 833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 08/2 FILING DATE: 02-JUN-1994 CLASSIFICATION: 424
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Rockville
STATE: Maryland
                                                                                                    68 GGACGGCCGGGCACCGCCATCACCCACGCTCTGACCTCTGCCTC 112
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                                                                                                                                                         GAGCCGCTGCGCCCACCGGGCTAGACCCGGCGCCATCATGCTGCTTCTGCCAAGCGCCGC 67
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                                                                                                                                                                                                                                                                                                                                                                                         nucleic acid
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Y: U.S.A.
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                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                          Pseudorabies virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk
                                                                                                                                                                                                                                                                                                                                           DNA (genomic)
                                                                                                                                                                                                                      6.6%;
57.1%;
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                                                                                                                                                                                                       0;
                                                                                                                                                                                                                      Score 33;
Pred. No.
                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                      DB 1; Length 1578;
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Gaps

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Title:
Perfect score:
Sequence:
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No.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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                488
485.4
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489
488
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Match Length DB ID
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500
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Copyright (c) 1993 - 2002 Compugen Ltd.
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9 AU121047
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BF037074 601456938
AU121047 AU121047
BC012376 Homo sapi
BG720251 602692311
AL548837 AL548837
B1460193 603201794
BG39661 6024459730
AL517760 AL517760
BG718443 60269447
AU515598 AV655598
AI364977 9241h10.x
AW161245 au70401.y
AU128589 AU128589
BI560138 7\68810.x
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225.8	229.4	232.2	239.8	240.2	241.8	252	254.2	274	290.6	294.6	322.2	325.8	325.8	327.4	328.2	332.4	332.8	340	341.2	344.4	349.4	354.6	369	384.8	400.2	403.6	413
		46.4	48.0	48.0	48.4	50.4	50.8	54.8	58.1	58.9	64.4	65.2	65.2	65;5	65.6	66.5	66.6	68.0	68.2	68.9	69.9	70.9	73.8	77.0	80.0	80.7	82.6
508	871	544	610	743	804	574	414	604	508	613	597	624	489	477	459	449	525	689	815	1073	774	723	460	759	718	1014	721
9	10	9	10	9	10	9	9	10	10	10	9	10	9	9	10	9	10	10	10	10	9	10	10	9	10	11	10
AW540879	BI147007	AI380421	вJ003633	AW174404	BF167144	AW612011	AI175585	BE679321	BM488205	BG145510	AW270086	BE956852	AI931324	A1876355	BF593004	AA672310	BF719381	BG548703	BG861908	BG861987	AU117184	BG721900	BF602672	AW107566	BG503926	AK013295	BE865164
AW540879 C0138C05-	BI147007 602913462	AI380421 tf96d02.x	вJ003633 вJ003633	AW174404 fi42g10.y	BF167144 601774707	AW612011 hg83e12.x	AI175585 EST219140		BM488205 pgm2n.pk0		AW270086 xv37g10.x	N	AI931324 ul67g11.y	AI876355 uk74a02.y	BF593004 naa30b10.	AA672310 vk89g09.s				BG861987 602794978	AU117184 AU117184	BG721900 602695624	BF602672 268056 MA	AW107566 ul91e01.y	BG503926 602552823	AK013295 Mus muscu	BE865164 UI-M-BH1-

## ALIGNMENTS

BASE COUNT	PEATURES SOUTCE	ORGANISM  REFERENCE AUTHORS TITLE JOURNAL COMMENT	74 TION TION ION N
/organism="Homo Sapiens" /db_xref="Haxon:966" /clone="IMAGE:3860504" /clone="IMPH_MGC.66" /tissue_type="adenocarcinoma" /lab_host="DH10B (phage-resistant)" /note="Organ: ovary: Vector: pcMV-SPORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.8 kb. Library constructed by Life Technologies. " 186 g 179 t	Tissue Procurement: DCTP_DTP  Tissue Procurement: DCTP_DTP  CDNA Library Preparation: Life Technologies, Inc.  CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)  DNA Sequencing by: Incyte Genomics, Inc.  Clone distribution: MGC clone distribution information can be  found through the I.M.A.G.E. Consortium/LLNL at:  http://inage.llni.gov  Plate: LLAM9595 row: 1 column: 09  High quality sequence stop: 738.  Location/Qualifiers  1761  // Corporation="lump capience"	Homo sapiens Homo sapiens Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  1 (bases 1 to 761) NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999) Contact: Robert Strausberg, Ph.D.	BF037074 761 bp mRNA linear EST 20-OCT-2000 60145693BF1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3860504 5', mRNA sequence. BF037074 BF037074 BF037074.1 GI:10745303

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COMMENT
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                                                                                        Genomics Laboratory
Helix Research Institute
1532-3 Yana, Kisarazu, Chiba
Tel: 81-438-52-3951
                        Email: genomics@hri.co.jp
HRI human cDNA project; 5'- & 3'-end one pass sequencing: Helix
Research Institute; cDNA library construction: Department of
Virology, Institute of Medical Science, University of Tokyo, and
                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 844)
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AU121047 HEMBB1 Homo
                                                                                                                                            Contact: Takao Isogai
                                                                                                                                                       Unpublished (2000)
                                                                                                                                                                                                       Ota, T., Nishikawa, T., Suzuki, Y., Ishii, S., Saito, K., Kawai, Y.,
                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                       human
              Helix Research Institute
                                                                            Fax: 81-438-52-3952
                                                                                                                                                                                            Yamamoto, J., Wakamatsu, A., Nakamura, Y., Nagai, T., Sugano, S. and
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                                                                                                                                                                  human cDNA project
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Pred. No. 4.6e-117;
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lens cDNA clone HEMBB1001966
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                                                                                                                                                                                      920 bp
Homo sapiens, clone IMAGE:3860504,
BC012376
BC012376.1 GI:15214504
NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                  HTC
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Direct Submission
Submitted (15-AUG-2001) National Institutes of Health, Mammalian Submitted (15-AUG-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="HEMBB1001966"
/clone_lib="HEMBB1"
/tione_tib="HEMBB1"
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/dev_stage="embryo, 10 weeks"
/note="vector: pME18SFL3"
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Pred. No. 4.8e-117;
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Villalon, D.K., Luna, R.A., Hale, S.M., Hulyk, S., Lu, X., Garcia,
A.M., Holloway, M., Telford, B, Hodgson, A., Bouck, J., Yu, W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Baylor College of Medicine Human Genom Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Muzny, D.M., Gibbs, R.A.
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/db_xref="taxon:9606"
/clone="IMAGE:3860504"
/tissue_type="Ovary, adenocarcinoma"
/clone_lib="NIH_MGC_66"
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500;
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Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Contact: Robert Strausberg, Ph.D.
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National Institutes of Health, Mammalian Gene Collection (MGC)
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/clone_lib="NIH_MGC_97"
/lab_host="DH10B"
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                                                                                             249 TGTCAAGTTGAACCTGTGGGAAGATGGTTTGAAGCTTTTGTTAAGAGGAGAAACAGAAAT 308
                                                                                                                                                          120 TGTCAAGTTGAACCTGTGGGAAGATGGTTTGAAGCTTTTGTTAAGAGGAGAAACAGAAAT 179
                                                                                                                                                                                                                                                                                                                                                         129 GGGACGTGAGCCGGCCCACCGGGCTAGACCCGGCGCCATCATGCTGCTTCTGCCAA 188
                                180 GCTTCTGCCTCTTTTCAGGAACTGGAGGATAAGAAAGAGTTATCCGAGGAATCAGAAGAT
                                                                                                                                                                                                                           189 GCGCCGCGGNACGGCCGGGGCCATCACCCACGCTCTGACCTCTGCCTCTACACTC 248
                                                                                                                                                                                                                                                                                            61 GCGCCGCGG-ACGGCCGGGGCACCGCCATCACCCACGCTCTGACCTCTGCCCTCTACACTC 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGACGTGAGCCGCCTGCGCCCACCGGGCTAGACCCGGCGCCATCATGCTGCTTCTGCCAA 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAATGTTATCTGATCCAGTG 594
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGTGAACCAATAAAAGAAGGAGAGATAATGACTACTTCACTTGCAT -AACTAAAGCTTAT 479
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500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP 191 91006 EVRY cedex - rrance
Email: segref@genoscope.cns.fr. Web: www.genoscope.cns.fr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Li, W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - France
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/ob_xref="taxon:9606"
/clone=ib="CSDD1043YJ07"
/clone=ib="LYI_NFL006_PL2"
/clone_ib="LYI_NFL006_PL2"
/tissue_type="placenta"

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179 c 194 g 173 t
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99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 489; DB 9;
Pred. No. 3e-114;
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                                Query Match
Best Local Similarity
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Matches 499;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    429
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  369 GAAGAATTGCAGTTGGAAGAGTTTCCCATGCTGAAAACACTTGATCCCAAAGACTGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240 GAAGAATTGCAGTTGGAAGAGTTTCCCATGCTGAAAACACTTGATCCCAAAGACTGGAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGGTGAACCAATAAAAGAAGGAGGAGATAATGACTACTTCACTTGCATAACTAAAGCTTAAT 479
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.

Email: cgapbs-rémail.nih.gov

Tissue procurement: Miklos Palkovits, M.D., Ph.D.

cDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki

Toshiyuki and Piero Carninci (RIKEN)

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 689) NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM11675 row: k column: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  High quality sequence stop:
Conservative
                                                                                                                                                          /note-"organ: testis; Vector: pBluescriptR (modified pBluescript KS+); Site_1: BamHI; Site_2: SalI-XhoI (dtcgag pBluescript KS+); Site_1: BamHI; Site_2: SalI-XhoI (dtcgag pBluescript FX+); Size-selected for average insert size 2:2 kb and normalized to ROT 5. This is a primary library enriched for full-length clones and constructed using the Cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/NHGRI, National Institutes of Health). Note: this is a NIH_MGC Library." a 156 c 176 g 148 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5267854"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="NIH_MGC_97"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 689
                                97.6%;
99.8%;
   0,
                                Score 488; DB 10;
Pred. No. 5.2e-114;
   Mismatches
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                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 93/ SP MRNA Linear EST 12-MAR-2001
602459730P1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:4582038 5',
mRNA secripore
                                                                                                                                                                                                                                                                                                                                     NIH-MGC http://mgc.nci.nih.gov/.
national Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                   High quality sequence stop: 758. Location/Qualifiers
                                                                                                                                                                DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov plate: LLCM1303 row: 1 column: 07
                                                                                                                                                                                                                                                                                                                         Unpublished
                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                    cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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/clone="IMAGE:4582038"
/clone_lib="NHH_MGC_16"
/tissue_type="retinoblastoma"
/lab_host="DH108 (phage-resistant)"
/note="Organ: eye; Vector: pOTB7; Site_1: XhoI; Site_2:
                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                           (1999)
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                                                                                                                                                                                                                                                                                                    AL511760 UTI_NFL011_NBC1 Homo sapiens cDNA clone CS0DA004YE24
                 Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 9106 EVRY cedex - France
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
                                                                                                      Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Euthería; Primates; Catarrhini; Homínidae; Homo.
1 (bases 1 to 955)
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ECORI; CDNA made by oligo-dT priming. Directionally cloned into ECORI/XhoI sites using the following 5 adaptor: GGCAGCAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
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505 CTGGTGAACCAATAAAAGAAGGAGATAATGACTACTTCACTTGCATAACTAAAGCTTATG
                                421 CTGGTGAACCAATAAAAGAAGGAGATAATGACTACTTCACTTGCATAACTAAAGCTTATG
                                                                                                                                                                                                      386 ACCAAGATCATTATGCAGTTCTTGGACTTGG-CATGTGAGATACAAGGCTACACAGAGAC
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                                                                                                                                                                                                                                                                                                      326 AAGAATTGCAGTTGGAAGAGTTTCCCATGCTGAAAACACTTGATCCCAAAGACTGGAAGA
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                                                                                                                                   AGATCAAAGCAGCTCATAAAGCAATGGTTTTAAAACATCACCCAGACAAACGGAAAAGCAG
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Pred. No. 5.8e~114;
0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     289 GAARAATTGCAGTTGGAAGAGTTTCCCCATGCTGAAAAMACTTGATCCCAAAGACTGGAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49 GGGACGTGAGCMGCTGCGCCCACCGGGCTAGAACCCGGCGCCATCATGCTGCTTCTGCMAA 108
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                                                                                                                                                                                                                              GAAATGTTATCTGATCCAGTG 549
                                                                                                                                                                                                                                                                                               GCTGGTGAACCAATAAAAGAAGGAGATAATGACTACTTCACTTGCATAACTAAAGCTTAT 528
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                                                                                                                                                                                                                                                                                                                             GCTGGTGAACCAATAAAAGAAGGAGATAATGACTACTTCACTTGCATAACTAAAGCTTAT 479
                                                                                                                                                                                                                                                                                                                                                                 CAGATCAAAGCAGCTCATAAAGCAATGGTTTTAAAAACATCACCCAGACAAACGGAAAGCA
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                                                                    BG718443 829 bp mRNA linear EST 08-MAY-2001
602656473F1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:4828339 5',
mRNA sequence.
BG718443.1 GI:13997630
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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/db_xref="taxon:9606"
/clone="CSODA004YE24"
/clone="tb="LTT_NFL011_NBC1"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the prime end vector. Library is not normalized, but is the control for the normalized libraries. Library was constructed by Life Technologies. Contact: Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax: (1) 301 610 8371 Email: http://fulllenarh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://fulllength.invitrogen.com"
174 c 222 g 221 t 1
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/lab_host="DH10B"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97.3%;
98.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6; Mismatches
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Pred. No. 1.3e-113;
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Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI), STOShiyuki and Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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Insight into hepatocellular carcinogenesis at transcriptome level by comparing gene expression profiles of hepatocellular carcinoma with those of corresponding noncancerous liver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chinese National Human Genome Center at Shanghai 351 Guo Shoujing Road, Zhangjiang Hi-Tech Park, 201203, P. R. China Tel: 86-21-50801919(ex.45) Fax: 86-21-50801922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 665)
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clone is available at CHGC in
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/db_xref="taxon:9606"
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/dev_stage="Adult"
/lab_host="SOLR"
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National Institutes of Health, M
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D.,
Emmert-Buck, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA Library Preparation: M. Bento Soares, Ph.D.

CDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be

found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria;
1 (bases 1 to 735)
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                                                                                                                                                                                                                                                                                                                                                                              primer: -40UP from Gibco
h quality sequence stop: 371.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gene Index
/lab_host="DH10B"
//note="Organ: kidney; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; a modified polylinker; Site_1: Not I; Site_2: Eco RI; plasmid DNA from the normalized library NCI_CGAP_Kid3 was prepared, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (cloneIDs 132376-1323911, 1456007-1456775, and 1500552-1502855). Subtraction by Bento Soares and M.
                                                                                                                                                                                                                                       /clone="IMAGE:2029507"
/clone_lib="NCI_CGAP_Kid11"
                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
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                                                                Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis,
                                                                                                            White,Y., Wylie,T., Watersto
WashU-NCI human EST Project
Unpublished (1997)
Other_ESTs: au70d01.x1
                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo. 1 (bases 1 to 579)
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AW161245.1 GI:6300278
                                   Tel: 314 286 1800
Fax: 314 286 1810
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GAATTTTATCTGATGCAGTG
                                                     CTGGTGAACCAATAGAAGAAGGAGATGATGACTACTTCACTTGCGTAACTTAAGCTTATT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMAGE Consortium (info@image.lln1.gov) for further information.
Seq primer: -40RP from Gibco
High quality sequence stop: 417.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    quality sequence stop: 417.
Location/Qualifiers
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5'-GAGACAGAGTTTTTTTTTTTTTTTT-3'. The library wa 5'-GAGACAGACTCGAGTTTTTTTTTTTTTTTTTT-3'. The library wa size-selected for >0.5 kb inserts and has an average insert size estimated at 1.2 kb. This library was constructed using the CAP-trapper method for full-length enrichment and has not undergone amplification. Librar was constructed by Dr. Claudio Schneider (LNCIB-Area
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Science Park,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: brain; Vector: pBluescript SK (Stratagene);
Site_1: SstI; Site_2: XhoI; Double-stranded cDNA was
prepared from human fetal brain tissue. 5' and 3'
adaptors were used in cloning as follows: 5' adaptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="frontal lobe"
/dev_stage="5 months post-conception"
/lab_host="DHIOB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:2781601"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
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Pred. No. 5.8e-110;
0; Mismatches 10;
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RESULT 14 AU128589

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HRI human cDNA project; 5'- & 3'-end one pass sequencing: Helix
Research Institute; cDNA library construction: Department of
Virology, Institute of Medical Science, University of Tokyo, and
Helix Research Institute.
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1532-3 Yana, Kisarazu, Cl
Tel: 81-438-52-3951
Fax: 81-438-52-3952
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Contact: Takao Isogai
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Yamamoto,J., Wakamatsu,A., Nakamura,Y., Nagai,T., Sugano,S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="NT2RP2003763"
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/clone="NT2RP2"
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/cell_line="NT2"
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181 CTTCTGCCTCTTTTCAGGAACTGGAGGAGAAGAAGAAGATTATCCGAGGAATCAGAAGATG 240	121 GTCAAGTTGAACCTGTGGGAAGATGGTTTGAAGCTTTTGTTAAGAGGAGAAACAGAAATG 180 	61 GCGCCGCGGACGGCGGGGGACCGCCATCACCCACGCTCTGACCTCTGCCTCTACACTCT 120 	1 GGGACGTGAGCCGCTGCGCCCACCGGGCTAGACCCCGGGCCCAFCATGCTGCTTCTGCCAA 60 	Query Match 87.6%; Score 438.2; DB 10; Length 656; Best Local Similarity 96.8%; Pred. No. 2.6e-101; Matches 479; Conservative 0; Mismatches 13; Indels 3; Gaps	) TNT 184 a	/organism="Homo sapiens" /db_xref="taxon:9606" /clone="IMAGE:5297303" /clone_lib="NIH_MGC_97" /lab_host="DH10B" /note="organ: testis; Vector: pBluescriptR (modified pBluescript KS+); Site_1: BamHI; Site_2: Sal1-xhoI (gtcgag pBluescript KS+); Site_1: BamHI; Site_2: Sal1-xhoI (gtcgag primer 5'-TTTTTTTTTTTTTTTTTTTTTTTTTVN-3',	Plate: LLAW11752 row: f column: 24 High quality sequence stop: 654. ATURES Location/Qualifiers source 1656	tion: Michael J. Brownstein (NHGRI), arninci (RIKEN) by: The I.M.A.G.E. Consortium (LINL) ncyte Genomics, Inc. MGC clone distribution information ca .A.G.E. Consortium/LLNL at:	AL Unpublished (1999) Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov	1 (bases NIH-MGC h	4 Hom Euk Mam	N BI562 BI562 EST.	RESULT 15 B1562033 B1		509 GCTGGTGAACCAATAAAAGAAGGAGATAATGACTTCACTTGCATAACTTAAGGATCC 568
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Search completed: October 10, 2002, 20:27:42 Job time: 702.733 secs

GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd

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## ALIGNMENTS

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RESULT 1
AAC98111
Human; colon cancer; colon cancer antigen; diagnosis; detection; identification; cytostatic; cardioactive; neuroprotective; vulnerary; immunomodulatory; muscular; gynaecological; gastrointestinal; nephrotropic; antiinfective; antibacterial; gene therapy; wound;
                                                                                                                                                                                                                          neural disorder; immune system disorder; muscular disorder; reproductive disorder; gastrointestinal disorder; renal dis
                                                                                                                                                                                                                                                                                                                         Human colon cancer antigen nucleotide sequence SEQ ID NO:121.
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                                                                                                                                                                                                                                                                                                                                                                                    AAC98111;
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             Rosen CA,
                                                                                              08-MAR-2000; 2000WO-US05883.
                                                                                                                           21-SEP-2000
                                                                                                                                                     WO200055351-A1.
                                                                                                                                                                                 Homo sapiens.
                                       (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                            infectious disease; cardiovascular disorder; ss.
             Ruben SM;
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                                                                    99US-0124270.
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                                                                                                                                                                                                                        AAATGTTATCTGATCCAGTG 500
                                                                                                                                                                                                                                                                                                            CTGGTGAACCAATAAAAGAAGGAGATAATGACTACTTCACTTGCATAACTAAAGCTTATG
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                                                                                                                                                                                         AAATGTTATCTGATCCAGTG 623
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Pred. No. 1.3e-142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 21; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T; 0 other;
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181 CTTCTGCCTCTTTTCAGGAACTGGAGGATAAGAAAGAGTTATCCGAGGAATCAGAAGATG

240

GTCAAGTTGAACCTGTGGGAAGATGGTTTGAAGCTTTTGTTAAGAGGAGAAACAGAAATG GCGCCGCGGACGGCCGGGGCACCGCCATCACCCACGCTCTGACCTCTGCCTCTACACTCT

GTCAAGTTGAACCTGTGGGAAGATGGTTTGAAGCTTTTGTTAAGAGGAGAAACAGAAATG

Q

Дb Qy В Qy

61

Matches Query Match

500;

Conservative

100.0%; 0;

Score 500; DB 24; Pred. No. 1.9e-142; Mismatches

Indels

0;

Gaps

0;

60

120 120 1845;

Local Similarity

1 GGGACGTGAGCCGCGCCCACCGGGCTAGACCCGGCGCCATCATGCTGCTTCTGCCAA 60

GCGCCGCGGACGGCCGGGGCACCGCCATCACCCACGCTCTGACCTCTGCCTCTACACTCT GGGACGTGAGCCGCCCACCCGGGCTAGACCCCGGCGCCATCATGCTGCTTCTGCCAA

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The invention relates to an isolated polynucleotide encoding a comparising a portion of an ovarian tumour protein. The comparise comprising a portion of an ovarian tumour protein. The comparise comparising a portion of an ovarian tumour protein. The comparise comparise comparison of an ovarian tumour protein. The comparison cancer by that expresses the sequences is useful for treating ovarian cancer by comparison that expresses the sequences is useful for treating ovarian cancer by comparison to follow the comparison of the patient to inhibit the comparison of cancer. The DNA sequences are useful as probes or primers comparison of a concer in a patient to inhibit the comparison of a concer in a patient comparison of a concer in a patient comparison of a concer in a patient composition of a concer in a patient composition of a concer in a patient comparison to a protein that binds to the ample from the patient, contacting the amount of protein that binds to the apart, comparison the amount of composition to a predetermined cut-off value and determining the presence of cancer. Sequences ABK09404-ABK09802 represent PCR primers and cDNA contacting the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of
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13-JUN-2000; 2000US-211457P.
21-JUN-2000; 2000US-213673P.
03-AUG-2000; 2000US-223288P.
01-MAR-2001; 2001US-272790P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; ovarian tumour protein; cancer; cytostatic; immunostimulant; ss; gene therapy; CD4+ T cell; CD8+ T cell; PCR primer.
Sequence 1845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated polynucleotide encoding polypeptide comprising portion of ovarian tumour protein, useful for detection, diagnosis and therapy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-097641/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 256; 285pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human ovarian cancer
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human ovarian tumour protein encoding cDNA #309.
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BP; 723 A; 312 C; 413 G; 397 T; 0 other;
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Benson DR,
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Carter D;
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            The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group I molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and non-small cell lung cancer, melanoma, colon, breast, head
                                                                                                                                                                                                                                                       Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by an isolated nucleic acid comprising an NA Group 3 or 4 molecule -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; helix-loop-helix; head; protein-binding factor; MPP11; synovial sarcoma; cytostatic; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAD11115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAD11115 standard; DNA; 1860 BP
                                                                                                                                                                                                                   Claim 57; Page 94-95; 152pp; English.
                                                                                                                                                                                                                                                                                                                                  WPI; 2001-457597/49.
                                                                                                                                                                                                                                                                                                                                                                      Stockert E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-JAN-2000; 2000US-0489101.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human small cell lung cancer associated gene, MPP11.
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or transitional cancer, leimyosarcoma or synovial sarcoma.
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present sequence is a DNA encoding human helix-loop-helix (HLH) protein-binding factor MPP11. This small cell lung cancer associated gene is designated as NY-SCLC-6.
                                        23-MAR-2000; 2000US-191637P
11-JUL-2000; 2000US-0614150
                                                                                                                                   WO200171042-A2
                                                                                                                                                            Drosophila melanogaster.
                                                                                                                                                                                     pharmaceutical; gene;
                                                                                                                                                                                                  Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                           Drosophila melanogaster genomic polynucleotide SEQ ID NO 1414.
                                                                                                                                                                                                                                                                                                          ABL16647 standard; DNA; 2225 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1860 BP; 738 A; 312 C; 413 G; 397 T; 0 other;
              (PEKE ) PE CORP NY
                                                                              23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                        26-MAR-2002
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                                                                                                                                                                                                                                                                                                                                                                           AAATGTTATCTGATCCAGTG 500
                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGTGAACCAATAAAAGAAGGAGATAATGACTTCACTTGCATAACTAAAGCTTATG 480
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                                                                                                                                                                                                                                                     (first entry)
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Pred. No. 1.9e-142;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 22; Length 1860;
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                                                                                                                                                                                                                                                                          RESULT 5
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABLIG175) and the encoded proteins
                                                                                                                                                                            C albicans apoptosis associated coding sequence #48
                         01-JUL-1999;
                                                                                                                     Candida albicans
                                                                                                                                                                                                     27-JUL-2001
                                                                                                                                                                                                                                                   AAH29904 standard; DNA; 1876 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 1414; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated nucleic acid dete
genes from Drosophila and for
 (JANC ) JANSSEN PHARM NV
                                                 03-JUL-2000; 2000WO-BE00077.
                                                                        11-JAN-2001.
                                                                                                                                             vaccine; autoimmune
                                                                                                                                                      Yeast; fungus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2225 BP; 623 A; 560 C; 632 G; 410 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     at ftp.wipo.int/pub/published_pct_sequences.
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                                                                                                                                                                                                                                                                                                              543 CATAACCAAAGCTTACGAGAT 563
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
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                                                                                                                                                                                                                                                                                                                                                                     AGACAAACGGAAAGCAGCTGGTGAACCAATAAAAGAAGGAGAGATAATGACTACTTCACTTG 463
                                                                                                                                                                                                                                                                                                                                                            CGATAAGCGGAAAGCCAAGGGCGAGGAAGTCATCCA---GGACGATGATTACTTCACATG
                                                                                                                                                                                                                                                                                                                                                                                                          CGAGGCCAGCGAGGATGATGTTCGACGGGCTTACAGGCGCATGGTTCTGCTGCACCATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCCAAAGACTGGAAGAACCAAGATCATTATGCAGTTCTTGGACTTGGCCATGTGAGATA 343
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                                                                                                                                                                                                                                                                                                                                                                                                                                CAAGGCTACACAGAGACAGATCAAAAGCAGCTCATAAAAGCAATGGTTTTAAAACATCACCC 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTAAGGAGTGGAAGGACCAGGATCATTACGCCGTTCTTGGCTTGGGCAAGCTCCGATA 425
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                                                                                                                                                                                                    (first entry)
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                         99EP-0870141.
                                                                                                                                                      apoptosis; infection; proliferative disease;
                                                                                                                                          disease; ischaemia; neurodegeneration; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 80.2; DB 23; Pred. No. 5.3e-14;
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Yeast and fungal nucleic acids encoding proteins involved in a pathway
                       WPI; 2001-367042/38.
P-PSDB; AAG70739.
                                                                     Contreras RH,
                                                                                                                   01-JUL-1999;
                                                                                                                                                                 11-JAN-2001
                                                                                                                                                                                                                                                                                                 27-JUL-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contreras RH,
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The present invention provides the protein and coding sequences of a number of apoptosis associated proteins from the yeast Saccharomyces cerevisiae and the fungus Candida albicans. These can be used to identify treatments for fungal and yeast infections, for proliferative diseases and for apoptosis related diseases such as autoimmune diseases, ischaemia and neurodegeneration. The present sequence is one of the C. albicans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yeast and fungal nucleic acids encoding proteins involved in a pathway leading to programmed cell death, useful for treating proliferative disorders, yeast and fungal infections, or for preventing apoptosis in certain diseases -
                                                                                                                                                                                                                                                     03-JUL-2000; 2000WO-BE00077.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yeast; fungus; apoptosis; infection; proliferative disease; vaccine; autoimmune disease; ischaemia; neurodegeneration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S cerevisiae apoptosis associated coding sequence YGR284C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAH29775 standard; DNA; 1802 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 17; Fig 2; 218pp; English.
                                                                                                    (JANC ) JANSSEN PHARM NV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       coding sequences of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        863 TCATCCAGATAAAAATCCGCTAGTGGTGGATTAGAAAACGATGGA 908
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         803 GAGAAGTAAAGCCACTGAAGATCAAATCAGAAGAGCCCACAGAAAACAAGTTTTGAAAACA
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Reekmans
                                De Backer MD,
                                                                                                                                                                                99EP-0870141
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                                Luyten WHML,
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                                    Malcorps IKL,
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                                                                                                                                                                                                                                                                                                                                        Membrane-forming peptide; amphiphilic; monovalent metal cation; suture, internal lining; slow-diffusion drug delivery vehicle; erythropoietin; insue-type plasminogen activator; haemoglobin; insulin; artificial skin; separation matrix; dialysis membranes; filter; collagen; cell migration; acparation matrix; dialysis membranes; filter; collagen; cell migration; Alzheimer's disease; scrapie infection; therapy; proteolytic diseation; acidic pH resistant; stomach acid; cell adhesion; cell monolayer; zuotin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention provides the protein and coding sequences of a number of apoptosis associated proteins from the yeast Saccharomyces cerevisiae and the fungus Candida albicans. These can be used to identify treatments for fungal and yeast infections, for proliferative diseases and for apoptosis related diseases such as autoimmune diseases, ischaemia and neurodegeneration. The present sequence is one of the S. cerevisiae
                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1802 BP; 593 A; 346 C; 368 G; 495 T; 0 other;
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                                                                                                 28-DEC-1992;
                                                                                                                                   23-SEP-1997
                                                                                                                                                                    US5670483-A.
                                                                                                                                                                                                                                                                                           Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zuotin gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAT90969 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      leading to programmed cell death, useful for treating proliferative disorders, yeast and fungal infections, or for preventing apoptosis
           (MASI ) MASSACHUSETTS INST TECHNOLOGY.
                                                                                                                                                                                                                                                                                                                             tissue
                                              30-NOV-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POCAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGCGTTTCAGAGCTACTGAAAGTCAAATCATCAAGGCTCACAGAAAAACAAGTTGTCAAG 878
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTCATGATGCTAGAGACTGGAAAACTGCCGATTTGTATGCTGCTATGGGTTTGTCTAAG 818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCAAGATTATTCAAAAGGCCTTTGAAACTTTGACTGATTC 973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCACTTGCATAACTAAAGCTTATGAAATGTTATCTGATCC 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACCATCCAGACAAGCAATCTGCTGCTGGTGGTAGTTTGGACCAAG-----
                                                                                                                                                                                                                                                                                                                           culture; differentiated cell; stratified cell layer; ds.
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                                             92US-0973326.
94US-0346849.
                                                                                               92US-0973326
                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                   /product= zuotin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10.4%; 55.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 51.8;
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .3e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1802;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This sequence represents the yeast zuotin gene. Fragments of the encoded CC protein can be used as the amphiphilic peptides used in the macroscopic CC membrane (AM) of the invention. The MM is formed by self-assembly of the containing monovalent metal cations. The MM are stable in serum, are CC containing monovalent metal cations. The MM are stable in serum, are CC medical products (e.g. sutures), or internal linings. The MM are useful cas slow-diffusion drug delivery vehicles for protein-type drugs, CC including erythropoletin, tissue-type plasminogen activator, synthetic chaemoglobin and insulin. They can be used in applications, such as CC separation matrices (e.g. dialysis membranes). Collagen may be combined CC with the peptides to produce membranes for use as artificial skin. The MM CC may be useful for treating Alzheimer's disease or scrapie infection. As CC they are resistant to proteolytic digestion and alkaline and acidic pH CC (such as stomach acid), drug delivery vehicles made of the MM could be CC call adhesion and migration. The permeability of the MM also permits CC diffusion of small molecules, to the underside of cell monolayers, useful cor lawers.
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1550 ACTCATGATGCTAGAGACTGGAAAACTGCCGATTTGTATGCTGCTATGGGTTTGTCTAAG 1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Membranes formed by self-assembly of amphiphilic peptide(s) - useful as bio:material(s), separation matrices, drug delivery vehicles,
                                                                                                                                                                                                                                                                                                                                        1724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3083 BP; 1026 A; 578 C; 627 G; 852 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 5; Column 29-34; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Holmes T,
                                                                                                                                                                                                                                             AAZ11218 standard; DNA; 3083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1610 TTGCGTTTCAGAGCTACTGAAAGTCAAATCATCAAGGCTCACAGAAAACAAGTTGTCAAG 1669
                                                                                                                                                                                                                                                                                                                                                                                                              1670 TACCATCCAGACAAGCAATCTGCTGCTGGTGGTAGTTTGGACCAAG-----ATGGCTTT 1723
                                                                                                                                                                                                                                                                                                                                                                            456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             336 GTGAGATACAAGGCTACACAGAGAGACAGATCAAAGCAGCTCATAAAAGCAATGGTTTTAAAA 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                    396 CATCACCCAGACAAACGGAAAGCAGCTGGTGAACCAATAAAAGAAGGAGATAATGACTAC 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      276 ACACTTGATCCCAAAGACTGGAAGAACCAAGATCATTATGCAGTTCTTGGACTTGGCCAT 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
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                                                                                                                                                                                                                                                                                                                                        TTCAAGATTATTCAAAAGGCCTTTGAAACTTTGACTGATTC 1764
                                                                                                                                                                                                                                                                                                                                                                          TTCACTTGCATAACTAAAGCTTATGAAATGTTATCTGATCC 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10.4%; 55.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 51.8; DE Pred. No. 3.1e-0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .1e-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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Membrane forming peptide; cell culturing; macroscopic membrane; amphiphilic peptide; slow-diffusion drug delivery system; cell growth; artificial skin; separation matrix; artificial tissue; scraple infection; althemer's disease; liver cirrhosis; kidney amyloidosis;

Human zuotin coding sequence.

09-NOV-1999

(first entry)

protein conformational disease; human; zuotin; ZUO1; ss.

Homo sapiens.

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This sequence encodes the human zuotin (ZUO1) protein. Fragments of the CC protein can be used in the in vitro method of the invention. The method ci is for culturing cells utilising stable macroscopic membranes formed by CC the self-assembly of amphiphilic peptides. The peptides are salt-induced CC to form insoluble and protease-resistant protein filaments with a CC wide variety of medical, research, industrial and biomaterial cc wide variety of medical, research, industrial and biomaterial cc wide variety of medical, research, industrial and biomaterial cc witro cell attachment and growth and for supporting artificial tissue (e.g. for in vivo use as implants). They are particularly useful as cc experimental models for Alzheimer's disease and scrapic infection and so camp be used in disease modelling experiments and to assay for agents cc which modulate the disease processes. Additionally, they may be used in this way to study liver cirrbosis, kidney amyloidosis and other protein conformational diseases. The membrane in the membrane/cell mixture c produced in the method: (i) supports cellular attachment and growth; cl is self-assembles to form large, macroscopic membranes that are c highly resistant to heat, alkaline/acidic pHs, chemical denaturants and consible to the naked eye if dyed but is otherwise transparent; (vi) may cr orraduced and stable in according to the resistant to the structures, high tensile strength and a porous structure; with continuous scructure; high tensile strength and approase structures with the produced and the province and the province to the produced by humans and animals; (viii) is inexpensive to produced.
                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cell cultures utilising stable macroscopic membranes formed by the self-assembly of amphiphilic peptides
                    1670 TACCATCCAGACAAGCAATCTGCTGCTGGTGGTAGTTTGGACCAAG-----ATGGCTTT 1723
                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3083 BP; 1026 A; 578 C; 627 G; 852 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Column 33-38; 49pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MASI ) MASSACHUSETTS INST TECHNOLOGY.
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                                                                                                             1610 TTGCGTTTCAGAGCTACTGAAAGTCAAATCATCAAGGCTCACAGAAAACAAGTTGTCAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-DEC-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                           produce; and (ix) can be produced and stored in sterile conditions
                                                             396 CATCACCCAGACAAACGGAAAGCAGCTGGTGAACCAATAAAAGAAGGAGATAATGACTAC 455
                                                                                                                                                        336 GTGAGATACAAGGCTACACAGAGACAGATCAAAGCAGCTCATAAAGCAATGGTTTTAAAA 395
                                                                                                                                                                                                                                                 276 ACACTTGATCCCAAAGACTGGAAGAACCAAGATCATTATGCAGTTCTTGGACTTGGCCAT 335
                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                   ACTCATGATGCTAGAGACTGGAAAACTGCCGATTTGTATGCTGCTATGGGTTTGTCTAAG 1609
                                                                                                                                                                                                                                                                                            Conservative
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92US-0973326.
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1292..2593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product= zuotin
                                                                                                                                                                                                                                                                                                           10.4%; Score 51.8; DB 20; Length 3083; 55.7%; Pred. No. 3.1e-05;
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                                                                                                                                                                                                                                                                                            0; Mismatches
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                                                                                                                                                                                                                                                                                          92;
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                                                                                                                                                                                                                                                                                            Indels
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                                                                                                                                                                                              QΥ
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RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
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ABL16646/c
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                                                                                                                        3205
                                                                                                                                                                                                                                                3265 TTAGATACGAGGCCAGCGATGATGTTCGACGGGCTTACAGGCGCATGGTTCTGCTGC 3206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4791 BP; 1218 A; 1152 C; 1049 G; 1372 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABB72072).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention is useful in developmental biology and in elucidating cell signaling and cell-cell interactions in higher eukaryotes for the development of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; SEQ ID NO 1411; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-656860/75.
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11-JUL-2000; 2000US-0614150
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3148 TCACATGCATAACCAAAGCTTACGAGATACTGGGTG 3113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             at ftp.wipo.int/pub/published_pct_sequences.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (PEKE ) PE CORP NY.
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                                                        457 TCACTTGCATAACTAAAGCTTATGAAATGTTATCTG 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        456 TTCACTTGCATAACTAAAGCTTATGAAATGTTATCTGATCC 496
                                                                                                                                                                                                                                                                                                                337 TGAGATACAAGGCTACACAGAGACAGATCAAAGCAGCTCATAAAAGCAATGGTTTTAAAAC 396
                                                                                                                                                                                                                                                                                                                                                                                                        ocal
                                                                                                                    ACCATCCCGATAAGCGGAAAGCCAAGGGCGAGGAAGTCATCCA---GGACGATGATTACT 3149
                                                                                                                                                                                ATCACCCAGACAAACGGAAAGCAGCTGGTGAACCAATAAAAGAAGGAGATAATGACTACT 456
                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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                                                                                                                                                                                                                                                                                                                                                                               Conservative
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Pred. No. 0.029;
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                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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RESULT 1:
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                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from brosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB7373-ABB72072).
                                                                                                                                                                                                                                                                                                                                                                    The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 1417; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated nucleic acid genes from Drosophila and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-MAR-2000;
11-JUL-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila melanogaster genomic polynucleotide SEQ ID NO 1417.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABL16648;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL16648 standard; DNA;
                                                                                                                         4951 TCACATGCATAACCAAAGCTTACGAGATACTGGGTG 4916
                                                                                                                                                                               5008
                                                                                                                                                                                                                                   5068 TTAGATACGAGGCCAGCGAGGATGATGTTCGACGGGCTTACAGGCGCATGGTTCTGCTGC 5009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Venter JC,
   27-MAR-1997
                           AAT58840;
                                                                                                                                                                                                                                                                                                                                             Sequence 5071 BP; 1321 A; 1255 C; 1155 G; 1340 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 interactions -
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                                                       AAT58840 standard;
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                                                                                                                                                                                                      ATCACCCAGACAAACGGAAAGCAGCTGGTGAACCAATAAAAGAAGGAGATAATGACTACT 456
                                                                                                                                                                                                                                                             TGAGATACAAGGCTACACAGAGACAGATCAAAAGCACCTCATAAAGCAATGGTTTTAAAAAC 396
                                                                                                                                                 TCACTTGCATAACTAAAGCTTATGAAATGTTATCTG 492
                                                                                                                                                                               ACCATCCCGATAAGCGGAAAGCCAAGGGCGAGGAAGTCATCCA---GGACGATGATTACT
                                                                                                                                                                                                                                                                                                     Similarity
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                                                                                                                                                                                                                                                                                       Conservative
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2000US-0614150
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(first entry)
                                                                                                                                                                                                                                                                                                  8.5%;
59.0%;
                                                     DNA; 580073 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cel
                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                     Score 42.4; DB Pred. No. 0.03;
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                                                                                                                                                                                                                                                                                                                   DB 23;
                                                                                                                                                                                                                                                                                         61;
                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                   Length 5071;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Previously identified as MORF-20079, encoded protein shows 25.73 percentage identity to DNA primase (dnaE) from Clostridium acetobutylicum" complement (13570..14247)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Previously identified as MORF-20078, the encoded protein shows 35.43 percentage identity to the Bacillus subtilis hypothetical protein covered in accession number GB:D26185_102"

12069..12725
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                                                                   36987..38978
                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement (14396..15217)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label- MG012
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                              /note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Previously identified as MORF-20076, the encoded protein shows 27.59 percentage identity to thymidylate kinase (CDC8) from Saccharomyces cerevisiae"
 *Previously identified as MORF-20099, the encoded protein shows 26.82 percentage identity to ATP-dependent nuclease (addA)
                                                                                 "previously identified as MORF-19826 and MORF-20093, the encoded protein shows 46.8 percentage identity to GTP-binding protein from E. coli"
                                                                                                                                                                                                                                                                         "Previously identified as MORF-20084, the encoded protein shows 32.23 percentage identity to transport ATP-binding protein (msbA) from E. coli"
                                                                                                                                                                                                                                                                                                                                                                                     "Previously identified as MORF-19823, MORF-20080 and MORF-20081, the encoded protein shows 33.04 percentage identity to 5.10-methylene-tetra-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Previously identified as MORF-20080, the encoded protein shows 31.50 percentage identity to the ribosomal protein S6 modification protein (rimK) from Escherichia
                                                                                                                                                                            "Previously identified as MORF-20092, the encoded protein shows 45.96 percentage identity to fructose-bisphosphate aldolase (tsr) from B. subtilis"
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мG023
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                                              MG032
                                                                                                                                        MG024
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method; open reading frame; ORF; ss.
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/*tag= m /label= MG039
                                                                                                                                                                                                                                                             /note "Previously identified as MORF-19832 and MORF-20108, the encoded protein shows 41. percentage identity to spermidine/ putrescine transport ATP-binding protein (potA) from E. coli"
                                                                                                                                                                           system
52366..53220
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/*tag= o
  complement
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                                                                                                                                                     .abel= MG044
"Previously identified as MORF-20112, the encoded protein shows 36.60 percentage identity to sialoglycoprotease (gcp) from Pasteurella haemolytica" ment (56970..58310)
                                                                                                 "Previously identified as MORF-20111, the encoded protein shows 29.45 percentage identity to spermidine/putrescine transport system permease protein C (potC) from E. co.
                                                                                                                                                                                    "Previously identified as MORE-20110, the encoded protein shows 26.51 percentage identity to spermiddine/putrescine transport system permease protein (potB) from E. coli"
                                                                                                                                                                                                                                                                                                                                                                            "The encoded protein shows 48.86 percentage identity to phosphotistidinoprotein-hexose phosphotransferase (ptsH) from Mycoplasma capricolum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Previously identified as MORF-20101, the encoded protein shows 48.13 percentage identity to thymidylate kinase (tdk) from B. subtilis"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Previously identified as MORF-19831 and MORF-20106, the encoded protein shows 43.20 percentage identity to glycerol-y-phosphate dehydrogenase (GUT2) from S. cerevisiae"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Previously identified as MORF-20105, tiencoded protein shows 46.83 percentage identity to glycerol kinase (glpK) from E. coli"
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              AAX61812;
                                    AAX61812 standard; DNA;
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                                                                                                                                                                           403
                                                                                                                                                                                                                                                              Local
                                                                                                 AGGTTAATGAAGCATATGAAGTTCTAAGTGATGAAG 22589
                                                                                                                         GCATAACTAAAGCTTATGAAATGTTATCTGATCCAG 498
                                                                                                                                                                         CAGACAAACGGAAAGCAGCTGGTGAACCAATAAAAGAAGGAGATAATGACTACTTCACTT 462
                                                                                                                                                                                                  AAAACGCTAGTTCTCAAGACATAAAAAGAGCTTTTAGAAAGCTTGCAATGCAATATCACC
                                                                                                                                                  CCGATCGTCATAAAGCAGAAAATGAAACTACTCAAAAAACAAAATGAGGAAAAGTTTAAAG 22553
                                                                                                                                                                                                                                                   85;
                                                                                                                                                                                                                                                                Similarity
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                                                                                                                                                                                                                                                                                                                                      /label=
/note= "
                                                                                                                                                                                                                                                                                                                                                                        /note= "Previously identified as MORF-19845, the encoded protein shows 28.84 percentage identity to glutamic acid specific protease (Spase) from Staphylococcus aureus 91065..91919
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/label=
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encoded protein shows 38.90 percentage
   identity to the protein disclosed in
        GB:D26185_104 from B. subtilis"
81047..82597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "Previously identified as MORF-20122,
encoded protein shows 30.25 percent
identity to the protein disclosed in
GB:D26185_99 from B. subtilis"
complement (65713..66249)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Previously identified as MORF-20117, the encoded protein shows 83.03 percentage identity to deoxyribose-phosphate aldolase (deoC) from Mycoplasma pneumoniae" complement (64898..65731)
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                                                                                                                                                                                                                                                            8.5%;
                                                                                                                                                                                                                                                                                                          "Previously identified as MORF-20136, the encoded protein shows 34.8 percentage identity to ribosomal protein S2 (rpS2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Previously identified as MORF-20114 and MORF-20115, the encoded protein shows 44 percentage identity to purine-nucleoside phosphorylase (deoD) from E. coli"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Previously identified as MORF-19834, MORF-20114 and MORF-20115, the encoded protein shows 43.02 percentage identity to signal recognition particle protein (ffh) from B.
                                      1039
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МG067
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                                                                                                                                                                                                                                                                                                from Spirulina plantensis"
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                                                                                                                                                                                                                                                             Score 42.4; DB 18; Pred. No. 0.36;
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20-JUN-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence encodes a Borrelia burgdorferi (Bb) protein of the invention, which is suitable for use in a vaccine. The Bb polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 202; 275pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Choi GH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-DEC-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B. burgdorferi antigenic protein coding sequence, t5-14.nt.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1039 BP; 526 A; 94 C; 212 G; 207 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               be used for detection of members of the Borrelia genus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  can be used in vaccines for eliciting protective antibodies to members of the Borrelia genus, particularly for the use against Lyme disease in humans and animals. They can be used for preventing or attenuating an infection caused by a member of the Borrelia genus. The products can also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             caused by Borrelia, particularly Lyme disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated Borrelia burgdorferi nucleic acids - used to develop products for the diagnosis, prevention and treatment of diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JUN-1998;
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                        345 TAGAGGAGAAAAAAGAAGAACAAGAT 370
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                                                                        GTGAACCAATAAAAGAAGGAGATAAT 449
                                                                                                                         AACAAGAAGACCAAAAAGCAAAAGAATCTAAAGATAAAGTTGAGGAAGAAAAAGAAGTTG
                                                                                                                                                                           TCAAAGCAGCTCATAAAGCAATGGTTTTAAAACATCACCCAGACAAACGGAAAGCAGCTG 423
                                                                                                                                                                                                                                                                          AAGATCATTATGCAGTTCTTGGACTTGGCCATGTGAGATACAAGGCTACAGAGACAGA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCCTCTTTTCAGGAACTGGAGGATAAGAAAGAGTTATCCGAGGAATCAGAAGATGAAG 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGGGAAAATTAAAGGATTTTTAGATAAGGTTTTAGATCCAGCAAAAGATAAAATTACTT 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1999-189980/16.
                                                                                                                                                                                                                                                                                                                            AATTAATGCAGGGCGATGATCCTAATAACAGAGCAATAGCACTGTTACCAGTATTGCCGG 224
                                                                                                                                                                                                                                                                                                                                                                             AATTGCAGTTGGAAGAGTTTCCCCATGCTGAAAACACTTGATCCCAAAGACTGGAAGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                             CAAGTAGTTCAAAAGTAGATGAATTAGCAAAAAATTACAAGAAGAAGATGAAGATAAATG 164
                                                                                                                                                                                                                           AAAATAGTCATGACAATCCACCAGTACCAAAAGTAAAAGCAGCAGCACAAAGTGGTGGTC 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 8.2%;
Similarity 45.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIMMUNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Erwin AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-0057483.
97US-0050359.
97US-0053344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98WO-US12718
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hanson MS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 41.2;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lathigra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0.03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1039;
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                                                                                                                         344
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Дb
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-SEP-1997;
20-JUN-1997;
22-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B. burgdorferi antigenic protein coding sequence, f5-14.nt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAX61811;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAX61811 standard; DNA; 1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence encodes a Borrelia burgdorferi (Bb) protein of the invention, which is suitable for use in a vaccine. The Bb polypeptides can be used in vaccines for elicting protective antibodies to members of the Borrelia genus, particularly for the use against Lyme disease in humans and animals. They can be used for preventing or attenuating an infection caused by a member of the Borrelia genus. The products can also infection caused by a member of the Borrelia genus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Borrelia burgdorferi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antigenic protein; vaccine; Lyme disease; infection; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1125 BP; 565 A; 101 C; 223 G; 236 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9859071-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     be used for detection of members of the Borrelia genus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 202; 275pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         caused by Borrelia, particularly Lyme disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated Borrelia burgdorferi nucleic acids - used to develop products for the diagnosis, prevention and treatment of diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB;
                                                                                                                                                                                                                                                                                                                                                       184
                                                                                                                                                                                                                                                                                                                                                                                                      128
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .8-JUN-1998;
                                                                                                                                                                                                                                                                                                     188
                                                                                                                                                                                                                                                                                                                                                                                                                                                   124 AAGTTGAACCTGTGGGAAGATGGTTTGAAGCTTTTGTTAAGAGGAGAAACAGAAATGCTT 183
  368 AACAAGAAGACCAAAAAGCAAAAGAATCTAAAGATAAAGTTGAGGAAGAAAAAGAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match 8.2%;
Local Similarity 45.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1999-189980/16.
                                                 TCAAAGCAGCTCATAAAGCAATGGTTTTAAAACATCACCCAGACAAACGGAAAGCAGCTG 423
                                                                                                      AAAATAGTCATGACAATCCACCAGTACCAAAAGTAAAAGCAGCAGCACAAAGTGGTGGTC
                                                                                                                                                     AAGATCATTATGCAGTTCTTGGACTTGGCCATGTGAGATACAAGGCTACACAGAGACAGA
                                                                                                                                                                                                    AATTAATGCAGGGCGATGATCCTAATAACAGAGCAATAGCACTGTTACCAGTATTGCCGG
                                                                                                                                                                                                                                                   AATTGCAGTTGGAAGAGTTTCCCATGCTGAAAACACTTGATCCCAAAGACTGGAAGAACC 303
                                                                                                                                                                                                                                                                                                     CAAGTAGTTCAAAAGTAGATGAATTAGCAAAAAAATTACAAGAAGAAGATGAAGATAATG
                                                                                                                                                                                                                                                                                                                                                       CTGCCTCTTTTCAGGAACTGGAGGATAAGAAAAGAGTTATCCGAGGAATCAGAAGATGAAG 243
                                                                                                                                                                                                                                                                                                                                                                                                      AAGGGAAAATTAAAGGATTTTTAGATAAGGTTTTAGATCCAGCAAAAGATAAAATTACTT 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY20114
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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97US-0053344.
97US-0053377.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 41.2; Db
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Lathigra

7.

DB 20;

178;

Indels Length 1125;

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Gaps

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247

RESULT 13

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424 GTGAACCAATAAAAGAAGGAGATAAT 449

В

128 TAGAGGAGAAAAAGAAGAACAAGAT 453

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AAX20252/c
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Best Local Similarity
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20-JUN-1997;
22-JUL-1997;
22-JUL-1997;
                                                                                                                                                                                                                                                                                                                                            AAX20248 to AAX20402 represent polynucleotide sequences isolated from Borrelia burgdorferi (Bb). Products derived from Bb can be used for the detection, diagnosis, characterisation, prevention and therapy of Bb infections, e.g. Lyme disease. They can also be used for the production of biosynthetic products, e.g. enzymes. Borrelia belongs to a family of motile, spiral-shaped bacteria called Spirochetes. Spirochetes are pathogenic in humans and Borrelia causes epidemic and spirochetes are pathogenic in humans and Borrelia causes epidemic and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Borrelia burgdorferi; spirochete; bacterium; pathogen; Lyme disease; epidemic relapsing fever; endemic relapsing fever; lyme borreliosis; infection; diagnosis; characterisation; detection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New isolated Borrelia burgdorferi nucleic acids - used to develop products for the detection, diagnosis, characterisation, prevention and therapy of infections, particularly Lyme disease
9161 AATTAATGCAGGGCGATGATCCTAATAACAGAGCAATAGCACTGTTACCAGTATTGCCGG 9102
                                                                     9221 CAAGTAGTTCAAAAGTAGATGAATTAGCAAAAAATTACAAGAAGAAGAAGATGAAGATAAATG
                                                                                                                                         9281 AAGGGAAAATTAAAGGATTTTTAGATAAGGTTTTAGATCCAGCAAAAGATAAAATTACTT 9222
                                                                                                                                                                                                                                                                                  Sequence 35515 BP; 10795 A; 5947 C; 4439 G; 13907 T; 427 other;
                                                                                                                                                                                                                                                                                                                                    endemic relapsing fever, and Lyme borreliosis, more commonly known
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 831-851; 1128pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-081217/07
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JUN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAX20252;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAX20252 standard; DNA;
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                              244 AATTGCAGTTGGAAGAGTTTCCCCATGCTGAAAACACTTGATCCCAAAGACTGGAAGAACC 303
                                                                                                      184 CTGCCTCTTTTCAGGAACTGGAGGATAAGAAAGAGTTATCCGAGGAATCAGAAGATGAAG 243
                                                                                                                                                                         124 AAGTTGAACCTGTGGGAAGATGGTTTGAAGCTTTTGTTAAGAGGAGAAACAGAAATGCTT 183
                                                                                                                                                                                                              148; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dougherty BA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-0057483.
97US-0050359.
97US-0053344.
97US-0053377.
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                                                                                                                                                                                                                               8.2%;
45.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fraser
                                                                                                                                                                                                              0,
                                                                                                                                                                                                                              Score 41.2; DB 20; Length 35515; Pred. No. 0.19;
                                                                                                                                                                                                            Mismatches 178; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith
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                                                                                            Best Local Sim
Matches 132;
                                                                                                                                                                                                   AAT05868 encodes a chicken leucocytozoan immunogenic protein, this Di or a fragment of it can be used in a recombinant vaccine to immunise against chicken leucocytozoan disease. The DNA is used in a vector and operatively linked to an expression regulatory sequence as in
                                Sequence 3399 BP; 1577 A; 508 C; 798 G; 516 T; 0 other;
                                                                                                                                                                                        standard practice.
                                                                                                                                                                                                                                                                                 Claim 6; Page 6-9; 35pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JP07284392-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chicken leucocytozoan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chicken leucocytozoan; immunogen; recombinant vaccine; protection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chicken leucocytozoan DNA encoding immunogenic protein for vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAT05868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAT05868 standard; DNA; 3399 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9041 AACAAGAAGACCAAAAAGCAAAAGAATCTAAAGATAAAGTTGAGGAAGAAAAAAGAAGTTG 8982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9101 AAAATAGTCATGACAATCCACCAGTACCAAAAGTAAAAGCAGCAGCACAAAGTGGTGGTC 9042
                                                                                                                                                                                                                                                                                                              Chicken leucocytozoan immunogenic protein - vaccine against chicken leucocytozoan disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-OCT-1995.
                                                                                                                                                                                                                                                                                                                                                                                                       (DOBU-) DOBUTSUYO SEIBUTSUGAKU
(KITA ) KITASATO KENKYUSHO SH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immunisation; vaccination;
                                                               199 AACTGGAGGATAAGAAAGAGTTATCCGAGGAATCAGAAGAATGAAGAATTGCAGTTGGAAG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        424 GTGAACCAATAAAAGAAGGAGATAAT 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304 AAGATCATTATGCAGTTCTTGGACTTGGCCATGTGAGATACAAGGCTACACAGAGACAGA 363
259 AGTTTCCCATGCTGAAAACACTTGATCCCAAAGACTGGAAGAACCAAGATCATTATGCAG 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364 TCAAAGCAGCTCATAAAGCAATGGTTTTAAAAACATCACCCAGACAAACGGAAAGCAGCTG 423
                                                                                                                                                                                                                                                                                                                                                            1996-006311/01.
DB; AAR97866.
                                                                                                                                                                                                                                                                                                                                                                                                                       DOBUTSUYO SEIBUTSUGAKUTEKI SEIZAI KYOKAI.
                                                                                                           Similarity
                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
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1150..3218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "fragment referred to in the claims, for use as insert in a recombinant vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                          8.2%;
46.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           against chicken leucocytozoan disease"
                                                                                              0
                                                                                                           Score 40.8; DB Pred. No. 0.075
                                                                                              Mismatches
                                                                                                                           DB 17;

    used in a recombinant

                                                                                            152;
                                                                                              Indels
                                                                                                                           Length 3399;
                                                                                            0;
                                                                                                                                                                                                                                                      this DNA
                                                                                          Gaps
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Se	В	Qy	뫄	Qy	ДЬ	Qy	Db
arch com b time	2951	439	2891	379	2831	319	2771
Search completed: October 10, 2002, 15:15:02 Job time : 208 secs	2951 TAACACATGAAGAAGAAGAAATGTAACATATGAAGAAGAAGAA 2994	439 AAGGAGATAATGACTACTTCACTTGCATAACTAAAGCTTATGAA 482	2891 AGBAGAAGTAACACATGAAGAAGAAGAAGAAAAGTAACACATGAAGAAGAAGAAGAAAAAG 2950	379 AAGCAATGGTTTTAAAACATCACCCAGACAAACGGAAAGCAGCTGGTGAACCAATAAAAG 438	2831 ATGAGGAAGAAGAAGAAGAAAATAAGGAAGAAGAAGAAGA	319 TICTTGGACTTGGCCATGTGAGATACAAGGCTACACAGAGACAGATCAAAGCAGCTCATA 378	2771 AAGATGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGA
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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Perfect score:
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             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1. /cgn2_6/ptodata/2/ina/5A_COMB.seq:*

2. /cgn2_6/ptodata/2/ina/6A_COMB.seq:*

3. /cgn2_6/ptodata/2/ina/6A_COMB.seq:*

4. /cgn2_6/ptodata/2/ina/ba_COMB.seq:*

5. /cgn2_6/ptodata/2/ina/backfiles1.seq:*

6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*
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1 US-07-885-971-15

1 US-08-087-7838-15

1 US-08-087-7838-15

1 US-08-194-088B-15

2 PCT-US-33-04648-15

5 PCT-US-33-04648-15

4 US-09-165-264-1

1 US-08-458-745-1

1 US-08-458-745-1

1 US-09-103-840A-1

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CTATCGCCGCGGCGG 500                AGTGTCGCCGCCAAGG 3937861	PGGCGCCGCGGCCGAGGCCGCGCCCCCCCCCCCCCACTATCGCCGCGAGGCGGCGGCGCGCGC	CGGCCGAGC	TCGCCGCCGGT	43 TCGGCC	39379	Qу
CCACCCCGCCAGTG 442                      3937921	GGTGGAC-ACAGCGGCCCTGAAGCAGCCTCCGGCGCCCCCTCCGCCAGCAGTG	SCGGCCCTO     ATTGCCGGO	GCCGCC	384 CGGTGGAC-         1 7980 CCATCGCC	38 39379	Qy Db
CTGCCGCCGCCTCTA 383            GGTGCCGCCGGTGCCG 3937981	CCGCTGCCGCCGCTGCCGCCGCCGCCCCCCCCCCCCCC	Greenecc	30060000        	324 CCGCT0       38040 CCGC0	39380	Oy Db
CGCCGCGGCTGCTGCGG 323                   TCGCCGAGGCCGCCGGTG 3938041	CAGGTGGACTTGCTCCCGGTGCTCGCCGCCGCCCAGGAGTCCGCCGGGGCTGCTGCGGG	GCCGTCGCC	GGACTTG	266 CAGGTO     38100 CCGCO	26 39381	Qy Db
GCGGCCGAGCCCCTC 265                GGCCGCACCGCCGCTG 3938101	CCATTCCAGGCCGCGGCGGCGCCCCCCCCCCCCCAGGCCCCGGCGCGCGAGCCCCCC	262626660 111111111111111111111111111111	CCAGGCC	206 CCATTO       38160 CCAT	2( 39381	Qy Db
Length 4403765; Indels 5; Gaps 3;	; Score 80.8; DB 4; L; Pred. No. 3.7e-06; 0; Mismatches 112;	16.2% y 61.0% rvative	ch l similarity 183; Conservat	2 2	Query M Best Lo Matches	Z #1 O
throughout the sequence	at various positions $a$ , $t$ , $c$ or $g$	CDC 1551 "n" bases represent	INFORMATION: INFORMATION: INFORMATION: -840A-2	HER INFORUMER INFORUMER INFORUMER INFORUMENTAL INFORUMENTAL INFORUMENTAL INFORUMENTAL INFORUMENTAL INFORUMENTAL INFORUMENTAL INFORUMENTAL INFORUMENTAL INFORMATION	OTHER OTHER OTHER OTHER	us-
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	/09103840A	us	2/c pplicat. 94328	SULT 1 -09-103-840A-2/c Sequence 2, Application Patent No. 6294328 GENERAL TROPARTION.	SULT 1 3-09-103-1 Sequence Patent N	S E
	ALIGNMENTS					
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US-09-128-155-16
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                                                                                                                                                                                                           US-09-050-863-2/c
                                                                                                                                                                                                                                   RESULT 3
                                                                                                                                         Sequence 2, Application US/09050863
Patent No. 6114111
GENERAL INFORMATION:
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APPLICANT: Pan, Yang
TITLE OF INVENTION: NOVEL MOLECULES OF TANGO-77 RELATED PROTEIN FAMILY
TITLE OF INVENTION: AND USES THEREOF
FILE REFERENCE: 09404/052001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 203; Conservative
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Patent No. 6117654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/128,155
CURRENT FILLING DATE: 1998-08-03
EARLIER APPLICATION NUMBER: US 60/091,650
EARLIER FILLING DATE: 1998-07-02
EARLIER APPLICATION NUMBER: US 60/054,646
EARLIER FILLING DATE: 1997-08-04
NUMBER OF SEQ ID NOS: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature LOCATION: (1)...(15233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                22199 CCCCGCCGGCGCGCGCCCCCCCCCCCCCCAGCCCCGACCGC 22243
                                                                                                                                                                                                                                                                                                                                                                                   22026 GCC-----CCCCCGCCCCCCCCCCCCCCCCCCCCACACCCGGCCCACACGCCAC 22078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Lao, Ying
APPLICANT: Hinng, Betty
APPLICANT: Payan, Don
TITLE OF INVENTION: Mammalian Protein Interaction Cloning
TITLE OF INVENTION: System
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 152331
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                        448 GCCCGCGGCCGAGGCCGCGCGCCCCCCCGCCGCCACTATCGC 492
                                                                                                                                                                                                                                                                                                                                                                                                                           148 GCAGGTCGGGGCTGAGCTCCAGTCCCGCTTCTTTGCCTCCCAGGGCTGCGCCCAGAGTCC 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268 GGTGGACTTGCTCCCGGTGCTCGCCGCCGCCCAGGAGTCCGCCGCCGGCTGCTGCCGCCGC 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 208 ATTCCAGGCCGCCGGCCCCCCCCCCCAGGCCCCGGCGGCGGCCGAGCCCCTCCA 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88 GGGGGTGGGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCCCT 147
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FastSEQ for Windows Version 3.0
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50.1%;
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; sequence 2, Application US/09359081 ; Patent No. 6316223
                           RESULT 4
US-09-359-081-2/c
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Best Local Similarity 48.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (415) 781-1989
TELEFAX: (415) 949-8711
INFORMATION FOR SEQ ID NO: 2:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Silva, Robin M.
REGISTRATION NUMBER: 38,304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                         1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1298 TECTCCTGCCCTCCTGCCCCTCCTGCCTCCTGCCCCTCCTGCTCCTGCCCC 1239
                                                                                                                                                          447 CGCCCGCGCCGAGGCCGCCCCCCCCCCCCCCCCCACTATCGCCGCGC 498
                                                                                             87 GGGGGGTGGCCGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27 TCCCGGTGTTTCCTTGCACGCTGCTGGCCCCCCCCTTCCCCGTGCTGGGCCTGGACTCCC 86
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OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Flehr, Hohbach, Test, Albritton & Herbert STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
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SYSTEM: PC-DOS/MS-DOS
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; Pred. No. 6.4e-05;
0; Mismatches 241; Indels 1; Gaps
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GENERAL INFORMATION:

APPLICANT:

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US-09-359-081-2
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Best Local Similarity
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                           1118 TGCCCCTCCTGCTCCTGCCCCTC-CTGCTCCTGCCCCTCCTGCTCCTGCCCCTCCTGCCC 1060
147 TGCAGGTCGGGGCTGAGCTCCAGTCCCGCTTCTTTGCCTCCCAGGGCTGCGCCCCAGAGTC 206
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FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Silva, Robin M.
REGISTRATION NUMBER: 38,304
REFERENCE/DOCKET NUMBER: A-65638/DJB/RMS
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/09/359,081
FILING DATE: 22-Jul-1999
CLASSIFICATION: <Unknown>
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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CORRESPONDENCE ADDRESS: 5
ADDRESSEE: Flehr, Hohbach, Test, Albritton
STREET: 4 Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE DESCRIPTION: SEQ ID NO:
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                                   CATTCCAGGCCGCGCGCGCCCCCCCCCCACGCCCCAGGCCCCGGCCGGCCGAGCCCCTCC 266
                                                                                                                                                                                                 AGGTGGACTTGCTCCCGGTGCTCGCCGCCGCCCAGGAGTCCGCCGCGGCTGCTGCGGCCG 326
                                                                             230;
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ZIP: 94111-4187
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Hiang, Betty
Payan, Don
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48.7%;
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APPLICANT: HOTLICK, Robert A.

APPLICANT: Damaj, Bassam B.

APPLICANT: Robbins, Alan K.

APPLICANT: RObbins, Alan K.

TITLE OF INVENTION: Eukaryotic Cells Stably Expressing Ger
TITLE OF INVENTION: From Multiple Transfected Episomes
FILE REFERENCE: 0867/10903US1
CURRENT APPLICATION NUMBER: US/09/130,114
CURRENT FILING DATE: 1998-08-06
NUMBER OF SEQ ID NOS: 36
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 1
; Sequence 1, Application US/0891064
; Patent No. 6251433
; GENERAL INFORMATION:
APPLICANT: Zuckermann et al.
; TITLE OF INVENTION: Compositio
; TITLE OF INVENTION: Polynucleo
; NUMBER OF SEQUENCES: 4
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Patent No. 5976807
GENERAL INFORMATION:
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Best Local Similarity 48.7%;
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ORGANISM: VEBNA
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       Polynucleotide Delivery
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                                    Compositions and Methods
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Pred. No. 6.1e-05;
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RESULT 7
US-07-884-811-15/c
; Sequence 15, Application US/07884811
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Patent No. 5316921
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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REGISTRATION NUMBER: 38,459
REFERENCE/DOCKET NUMBER: 12:
TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                1164 TGCCCCTCCTGCCCCCTC-CTGCTCCTGCCCCTCCTGCCTCCTGCCCCTCCTGCCCC 1106
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                                                                                                                447 CGCCCGCGCCGAGGCCGCCGCCCCCCCCCCCCCCCCCACTATCGCCGCGC 498
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                                                                                      985 CTCCTGCCCCTCCTGCCCCTCCTGCTCCTGCCCCTCCTGCTCCTGC 934
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Local Similarity 48.7%;
les 230; Conservative
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STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
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Pred. No. 5.9e-05;
0; Mismatches 241;
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Best Local Similarity
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APPLICANT: Godowski, Paul J. Lokker, Nathalie A. Mark, Melanie R.
TITLE OF INVENTION: SINGLE-CHAIN HEPATOCYTE GROWTH FACTOR VARIANTS
NUMBER OF SEQUENCES: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US, FILING DATE: 19920518
CLASSIFICATION: 530
PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                      2818
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-3216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                               ATTORNEY/AGENT INFORMATION:
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  447 CGCCCGCGGCCGAGGCCGCCGCCCCCCCCCCCCCGCCACTATCGCCGCGC
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CITY: South San Francisco
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 10596 bases
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TELEX: 910/371-7168
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                                                                                                                                                                    GGGGGGTGGGCCGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCCC 146
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48.78;
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Pred. No. 5.9e-05;
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US-07-885-971-15/c
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Best Local Similarity 46...
230; Conservative
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INFORMATION FOR SEQ ID NO:
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CLASSIFICATION: 530
PRIOR APPLICATION DATA:
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TITLE OF INVENTION:
SEQUENCE CHARACTERISTICS:
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TELEPHONE: 415/225-3216
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPOTER READABLE FORM: MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
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CITY: South San Francisco
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
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                              GGGGGGTGGGCCGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC 146
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460 Point San Bruno Blvd
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Pred. No. 5.9e-05;
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GENERAL INFORMATION:
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Best Local
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                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 15:
SEQUENCE CHARACTERISTICS:
LENGTH: 10596 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/8
FILING DATE: 18 MAY-92
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/8
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APPLICATION NUMBER: US/08
APPLICATION 13-Jul-1993
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CORRESPONDENCE ADDRESS
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-5416
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MEDIUM TYPE: 3.5 inch, 1.44 mb |
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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ATTORNEY/AGENT INFORMATION:
NAME: MATSCHAUG, Diane L.
REGISTRATION NUMBER: 35,600
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                                                                                                                                                       TYPE: Nucleio
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                                                                                                                                                                                                                    Local Similarity 48.7 les 230; Conservative
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South San Francisco
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Nucleic Acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inch, 1.44 Mb floppy disk
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Pred. No. 5.9e-05;
0; Mismatches 241; Indels
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; Sequence 15, Application US/08194088B

; Patent No. 5580963
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIF: 3400
COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
COMPUTER: PC-DOS/MS-DOS
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APPLICATION NUMBER: 07/884811
FILING DATE: 18-MAY-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: GODOWSKI, Paul J. LOKKER, Nathalie A. Mark, Melanie R. TITLE OF INVENTION: SINGLE-CHAIN HEPATOCYTE GROWTH FACTOR VARIANTS NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION: TELEPHONE: 415/225-2614
                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 10596 bases
                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 18-MAY-1992
ATTORNEY/AGENT INFORMATION:
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CURRENT APPLICATION DATA:
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               87 GGGGGGTGGGCGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC 146
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                                                                                                                           Local Similarity
                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                              TYPE:
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f: 460 Point San Bruno Blvd
South San Francisco
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                                                                                                               Conservative
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                                                                                                           Score 74.4; DB 1;
Pred. No. 5.9e-05;
0; Mismatches 241;
241;
                                                                                                                                           Length 10596;
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US-08-194-087-15/c
; Sequence 15, Application US/08194087
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Query Match 14.9%;
Best Local Similarity 48.7%;
Matches 230; Conservative
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TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 77
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-3216
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                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
PRIOR APPLICATION DATA:
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                                                                                                                                                                   TELEPHONE: 415/952-9881
                                                                                                                                                                                                                                         NAME: Dreger, Ginge
REGISTRATION NUMBER:
                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: patin (Genentech)
                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94080
                                                                                                      nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 California
                                                                                                                       10596 bases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                        IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                     5.25 inch, 360 Kb floppy disk
                                                                                                                                                                                                                                                                                                                                               18-MAY-1992
                                                                                                                                                                                                                                                    Ginger R.
                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1, Paul J. Lokker, Nathalie A. Mark, Melanie R. HEPATOCYTE GROWTH FACTOR PROTEASE DOMAIN VARIANTS 21
                                                                                                                                                                                                                                                                                                                                                               US/08/194,087
                                                                                                                                                                                                                                         33,055
    0; Mismatches
                   Score 74.4; DB 2;
Pred. No. 5.9e-05;
                                Length 10596;
      Indels
      1;
    Gaps
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PCT-US93-04648-15/c
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               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2818
                                                               NAME: Dreger, Ginger R. REGISTATION NUMBER: 33,055
REFERENCE/DOCKET NUMBER: 75
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415/225-3216
                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2639 CTCCTGCCCCTCCTGCTCCTGCCCCCTCCTGCCCCTGCCCCTGCCCCCTGCCCC 2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 18-MAY-92
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/885971
                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA: APPLICATION NUMBER: PC
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SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     447 CGCCGCGGCGAGGCCGCGCCGCCCGCCGCCACTATCGCCGCGGC 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87 GGGGGGTGGGCCGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC 146
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               TELEFAX: 415/371-7168
TELEX: 910/371-7168
                                                                                                                                                                                                                    APPLICATION NUMBER: 07, FILING DATE: 18-MAY-92
                                 TELEPHONE: 415/952-9881
                                                                                                                                                                                                                                                                          CLASSIFICATION
                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                            94080
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                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                            APPLICANT: Reed, Steven G.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Dillon, Davin C.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR THE PREVENTION AND NUMBER OF SEQUENCES: 241
CORRESPONDENCE ADDRESS:
                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
             ATTORNEY/AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 31,392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2698 TGCCCCTCCTGCTCCTGCCCCTC-CTGCTCCTGCCCCTGCTGCCCCTCCTGCCC 2640
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 447 CGCCCGCGGCCGAGGCCGCGCGCCCCCCCCCCCCCCACTATCGCCGCGC 498
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TYPE: NUCLEIC ACID
STRANDEDNESS: single
                                                                                  APPLICATION NUMBER: US/0 FILING DATE: 07-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87 GGGGGGTGGGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC 146
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                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                         STREET:
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REFERENCE/DOCKET NUMBER:
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                                                                                                                                                                                                                                                                          Seattle
                                                                                                                                                                                                                                                         Washington
                                                                                                                                                                                                                                                                                           6300 Columbia Center, 701 Fifth Avenue
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48.7%;
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 210121.457
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Pred. No. 5.9e-05;
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                                                                                                                                                                                                                                              SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 11
LENGTH: 320
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 11, Application US/09165264
Patent No. 6197510
GENERAL INFORMATION:
                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (206) 622-4900
TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 16
SEQUENCE CHARACTERISTICS:
LENGTH: 985 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEO ID NOS: 14
                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Vinayagamoorthy, Thuraiayah
TITLE OF INVENTION: Multi-Loci Genomic
                                                                                                                                                                                                        OTHER INFORMATION: Description of Artificial Sequence:Primer sequence
                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: (206) 622-4900
237 CGCCCCAGGCCCGGCCGGCCGAGCCCCTCCAGGTGGACTTGCTCCCGGTGCTCGCCGCCG 296
                                      413 CCGGCGCCCCCCCCCCCCCCCCCAGTGTCGGCGCCGGCGGCCGAGGCCGCGCCCCC 472
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     115 CCCGCCACCTCAGGGTCACGCCCAGAACCCCCTGCAGGTCGGGGGCTGAGCTCCAGTCCCG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273 GGTGGCGCCGACAACGCCGCCGGTGCCG 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             235 CACGCCCCAGGCCCCGGCGGCCGAGCCCCTCCAGGTGGACTTGCT--CCCGGTGCTCGCC 292
                                                                                                                                     Local
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                                                                            GCCTCCGCCGCCACTATCGCCGCGGCGG 500
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CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 14
LENGTH: 320
TYPE: DNA
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TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747
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                                                                                                                                                                                                                     Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
Contact: Genoscope
Genoscope - Centre National de Sequencage
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                                                                                                                                                                                                                                                                                                                                                                                                                      AL555273 LTI_NFL006_PL2 Homo sapiens cDNA clone CSODK007YN22 Prime, mRNA sequence.
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                                                                                                                                                                                       seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
/clone_lib="LTI_NFL006_PL2"

/tissue_type="placenta"

/notes"Vector: pcMvSpORT 6; Site_1: NotI; 1st strand cDNA

/notes"Vector: pcMvSpORT 6; Site_1: NotI; 1st strand cDNA

was primed with a NotI oligo(dT) primer. Five prime end

enriched, double-stranded cDNA was digested with Not I and

cloned into the Not I and Eco RV sites of the pcMvSpORT 6

vector. Library was normalized. Library was constructed by

life Technologies. Contact: Feng Liang Life Technologies,
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Site_1: Sall; Site_2: NotI; Cloned unidirectionally.
Primer: Oligo dT. Library constructed by Life
Technologies."
                                                                                                                                             /organism="Homo sapiens"
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                                                                                                                                                                                                                                                                          Contact: Genoscope
Genoscope - Centre National de Sequencage
BP 191 91016 EVRY cedex - France
Email: segref@genoscope.ons.fr, Web : www.genoscope.cns.fr.
                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Primates; Catarrhini; Ho
1 (bases 1 to 954)
Li,W.B., Grüber,C., Jessee,J. and Polayes,D.
Full-length cDNA libraries and normalization
Unpublished (2001)
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence.
/tissue_type="neuroblastoma cells"
/lab_host="DH10B"
/note="Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA
/note="Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA
was primed with a NotI-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pCMVSPORT 6
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a 325 c 259 g 200 t
                                                                                                                                                    /clone_lib="LTI_NFL003_NBC3"
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92.6%;
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Pred. No. 5.5e-31;
0; Mismatches 27;
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1 (bases 1 to 921)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)
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/note="Vector: pcMVSpORT 6; Site_1: NotI; lst strand cDNA
/note="Vector: pcMVSpORT 6; Site_1: NotI; lst strand cDNA
was primed with a NoII-oligo(dT) primer. Five prime end
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pcMVSpORT 6
vector. Library was normalized. Library was constructed by
Life Technologies. Contact: Feng Liang Life Technologies,
a division of Invitrogen 9800 Medical Center Drive
                                                                                                                                                                             /sex≈"male"
                                                                                                                                                                                                /clone_lib="LTI_NFL010_BC2"
                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
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94.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         331;
                                                                                                                                                                                                                 Email: cgapbs-r@mail.nlh.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
cDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM328 row: d column: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 902)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 902)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BED1415642F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3634139 5',
                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
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                                                                                                                                                                   quality sequence start: 33 quality sequence stop: 344.
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375 c 286 g 141 t 1
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/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:3634139"
/clone_lib="NIH_MGC_8"
/tissue_type="Burkitt lymphoma"
                                                                                                                                          Location/Qualifiers
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88.0%;
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Pred. No. 1.
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RESULT 6
AW763155
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AUTHORS
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Other_ESTs: urf0e04.xl
Contact: Robert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Ilssue Procurement: Lothar Hennighausen Ph.D., Chu-xia Deng Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AW763155 439 bp mRNA linear EST 04-MAY-2000 ur60e04.yl NC1_CGAP_Mam3 Mus musculus cDNA clone IMAGE:3154686 5' similar to gb:M94046 Human zinc finger protein (HUMAN);, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                    NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                   Tumor Gene Index
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1 (bases 1 to 439)
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                                                                                                image.llnl.gov/image/html/iresources.shtml
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quality sequence stop: 420
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/note="Organ: lymph; Vector: pOTB7; Site_1: xhoI; Site_2:
ECORI; cDNA made by oligo-dT priming. Directionally
cloned into EcoRI/XhoI sites using the following 5'
adaptor: GGCACGAG(G). Size-selected >500bp for average
insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
california, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
a 315 c 266 g 171 t 1 others
                      -40RP from Gibco
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COMMENT

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282;
                                                                                                                                                                                                                                                                                                                                                                                                  2152 bp
Mus musculus, clone IMAGE:3154686,
EC004758
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Chu-xia Den
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Baylor College of Medicine Human Genome
                                                                                                  NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
                                                                                                                                                            Submitted (21-MAR-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                            Strausberg, R
                                                                                                                                                                                                                                                                                       Mammalia;
                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                           Mus musculus
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                                                                                                                                                                                                                                                                                                                                               nouse mouse
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/strain="129 - C57/B6 - FVBN"
/db_xref="taxon:10090"
/clone="TMAGE:3154686"
/clone_1ib="NCI_CGAP_Mam3"
/tissue_Type="tumor, gross tissue"
/dev_stage="10 months"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: SalI; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Chu-Xia Deng, NIH Reference for transgenic model: Xu et al., Nature Genetics 22, 37-43 (1999)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host="DH10B"
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87.0%;
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Pred. No. 4.
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VERSION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequencing Center
Center code: BCM-HGSC
Center code: http://www.bgsc.bcm.tmc.edu/cdna/
Reb site: http://www.bgsc.bcm.tmc.edu/cdna/
Contact: villalon@bcm.tmc.edu.
Villalon, D.K., Luna, R.A., Hale, S.M., Hulyk, S., Lu, X., Garcia,
Villalon, D.K., Luna, R.A., Hale, S.M., Bouck, J., Yu, W.,
A.M., Holloway, M., Telford, B, Hodgson, A., Bouck, J., Yu, W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE988668 379 bp mrNA linear EST 05-OCT-2000 UI-M-CG0p-bhy-g-11-0-UI.sl NIH_BMAP_Ret4_S2 Mus musculus cDNA clone UI-M-CG0p-bhy-g-11-0-UI 3', mrNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clone distribution: MGC clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 6 Row: k Column: 1
This clone has the following problem: frame shifted.
Location/Qualifiers
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                                   Genome Res. 6 (9), 791-806 (1996) 97044477
                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 379)
Bonaldo, M. F., Lennon, G. and Soares, M. B.
Contact: Chin, H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BE988668.1 GI:10665238
                                                                                                                    discovery
                                                                                                                                                   Normalization and subtraction: two approaches to facilitate gene
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692 c 619 g 406 t
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/db_xref="taxon:10090"
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Pred. No. 3.5e-23
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RESULT 9
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                                                      DEFINITION
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                                                                                                                                                                                                                                                                                                                                                     354 CCGCGCCCCGGCCCCTGCCGCCGCCTCTACGGTGGACACAGCGGCCCTGAAGCAGCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                          234 CCACGCCCAGGCCCGGCGGCCGAGCCCCTCCAGGTGGACTTGCTCCCGGTGCTCGCCG 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69 CGGCGCCTCCTCCGCCACCCCTGCCGTCTCCGCACCAGCCGCCGAGGCCGCGCGCCCCCCG
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                                                                                                                                                                                                                                                                                                                 CTGCACCCCGGGCCCTGCGCCGCCTCCACAGTGGACACAGCGGCCCTGAAGCAGCCTC
                                                                                                                                                                   ccccccccc 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA sequence.
BG773423
BG773423.1 GI:14084076
                                                    BG773423 465 bp mRNA linear EST 15-W 602720325F1 NIH_MGC_97 Homo sapiens cDNA clone IMAGE:4837135
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Similarity 87.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /lab_host="pH10B (Life Technologies)"
/lab_host="PH10B (Life Technologies)"
/note="Vector: pT7T3D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not 1; Site_2: Eco RI; The
NIH_BMAP_Ret4_S2 library is a subtracted library,
ultimately derived from mouse retina tissue libraries at
various stages of development. For a detailed description
of the library from which this clone was derived, please
visit our web site at brainest.eng.ulowa.edu.
TAG_SED=None found"

TAG_SED=None found"

43 t
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/clone="UI-M-CG0p-bhy-g-11-0-UI"
/clone_lib="NIH_BMAP_Ret4_S2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/strain="C57BL/6J"
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Pred. No. 5e-22;
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                                                                           EST 15-MAY-2001
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RESULT 10
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Email: Grapbs-remail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                    protein (HUMAN);, mRNA sequence.
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                                 Mus musculus
                                                                                                                                   AI509985.1 GI:4408890
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Plate: LLAM10769 row: a column: 08
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                                                                   house mouse.
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//db_xref="taxon:9606"
//db_xref="taxon:9606"
//clone=_lib="NMAGE:4837135"
//clone=_lib="NHH_MGC_97"
//lab_host="DH10B"; Vector: pBluescriptR (modified folden "Organ: testis; Vector: pBluescriptR Sall-xhoI (9tc9a9 pBluescript K8+); Site_1: BamHI; Site_2: Sall-xhoI (9tc9a9 pBluescript K8+); Site_1: BamHI; Site_2: 2 kb and constanted for average insert size 2:2 kb and normalized to ROT 5. This is a primary library enriched for full-length clones and constructed using the Cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/NHGRI, National Institutes of Health). Note: this is a NIH_MGC Library."
49 a 166 c 109 g 41 t
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157 c 113 g
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/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:476477"
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/dev_stage="13.5-14.5
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392 ACAGCGGCCCTGAAGCAGCCTCCGGCGCCCCCCCCACCCCGCCAGTGTCGGCGCCC 451
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ACAGCGGCCCTGAAGCAGCCTCCGGCGCCTGCTCCGCCACCCCTGCCGTCTCCGTACCA 306
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Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
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The Washu-NCI Mouse EST Project 1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 337)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13'], on equal amounts of mRNA from 2 13.5dpc and 2 14.5dpc embryos [total RNA provided by Minoru Ko, Wayne State Univ., from 2 ]; double-stranded CDNA was ligated i Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT773 vector. Library went through one round of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     normalization, and was constructed by Bento Soares and M.Fatima Ronaldo. "
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/sex="unknown"
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Pred. No. 3.8e-18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87 GGGGGGTGGGCGGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC 146
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                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCGGCAGCAGTAGCAGCC 259
                                                                                                                                                                                                     AGGTGGACTTGCTCCCGGTGCTCGCCGCCGCCCAGGAGTCCGCCGCCGCTGCAGCGGCAG 239
                                                                                                                                                                                                                               AGGTGGACTTGCTCCCGGTGCTCGCCGCCCACCAGGAGTCCGCCGCGGCTGCTGCGGCCG
                                                                                                                                                                                                                                                                                                                          cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov plate: LLCM334 row: c column: 16
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national Institutes of Health, Mammalian Gene Collection (MGC)
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Tissue Procurement: ATCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="choriocarcinoma"
/lab_host="pH10B (phage-resistant)"
/note="Organ: placenta; Vector: pOTB7; Site_1: XhoI;
/note="EcoRI; CDNA made by oligo-dT priming.

Directionally cloned into EcoRI/XhoI sites using the
following 5 adaptor: GGCACGAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by
Ling Hong in the laboratory of Gerald M. Rubin (University
of California, Berkeley) using ZAP-CDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies)."
a 250 c 194 g 144 t
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/clone_lib="NIH_MGC_21"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 215.2; DB 1
Pred. No. 5.2e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10; Length 713;
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                                                                                    BASE COUNT
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Oligo-dT track not found, Not I site shown in beginning of sequence is likely internal to the message. cDNA Library Preparation: M.B.
Soares Lab Clone distribution: NCI-CGAP clone distribution
Information can be found through the I.M.A.G.E. Consortium/LINL at:
www.bio.llnl.gov/bbrp/image/image.html The following repetitive
elements were found in this cDNA sequence: 64-113,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               235 bp mRNA linear EST 10-SEP-: UI-H-BIO-aao-h-01-0-UI.sl NCI_CGAP_Subl Homo sapiens cDNA clone IMAGE:2710128 3', mRNA sequence.
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Unpublished (1997)
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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/clone_tib="NAT_CGAP_Subl"
/lab_bst="pH10B ((ife Technologies)"
/lab_bst="pH10B ((ife Technologies)"
/lab_bst="pH10B ((ife Technologies)"
/note="vector: pT?T3D-pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The
NCI_CGAP_Subl library is a subtracted library derived from
BI. BI constitutes a mixture of 21 normalized or
subtracted NCI_CGAP intractive of 21 normalized or
subtracted NCI_CGAP kid3; NCI_CGAP_CO10, NCI_CGAP_CO16,
NCI_CGAP_Kid31, NCI_CGAP_Lid2, NCI_CGAP_Br2, NCI_CGAP_Lid3,
NCI_CGAP_EXId3, NCI_CGAP_Lid2, NCI_CGAP_Br2, NCI_CGAP_Lid3,
NCI_CGAP_EXId3, NCI_CGAP_Lid2, NCI_CGAP_Br2, NCI_CGAP_Lid3,
NCI_CGAP_EXId3, NCI_CGAP_Lid3, NCI_CGAP_Br2, NCI_CGAP_Lid3,
NCI_CGAP_Lid4, NCI_CGAP_Lid19, NCI_CGAP_Br2, NCI_CGAP_Lid5,
NCI_CGAP_SId5, NCI_CGAP_Lid19, NCI_CGAP_Lid6,
NCI_CGAP_Lid5, NCI_CGAP_Lid19, NCI_C
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                                                             TAG_LIB-NCI_CGAP_LUS
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/db_xref="taxon:9606"
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   42.28;
Score 211.2; DB 9;
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   Length 235;
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110 TCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCCTGCAGGTCGGGGCTGAGCTCCAG 169
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 721)
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Plate: LLCM1257 row:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
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                                                                                                                   Similarity
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                                                                                         Conservative
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/clone_1ib="NMGE.455884"
/clone_1ib="NHI_MGC_46"
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/tissue_type="leiomyosarcoma cell line"
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/note="Organ: uterus; Vector: pOTB7; Site_1: XhoI; Site_2:
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Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                            Library
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                                                                                                                Score 192; DB 10;
Pred. No. 3.6e-15;
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                                                                                         Mismatches
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                                                                                                                                         Length 721;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Possible reversed clone: polyT not found. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The Washu-NCI Mouse EST Project 1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: mouseest@watson.wustl.edu
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314 286 1810
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GCCGCCG-CCAGGAGTCCGCCGCGGCAGCGGCAGCAGCAGCAGCAGCAGCAGCCCCTCCC 246
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AI426137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. This clone was previously sequenced on the 5' end only, this new data is from the 3' end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
Contact: Marra M/WashU-NCI Mouse EST Project 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R. and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
/tissue_type="embryo"
/dev_stage="13.5-14.5dpc total fetus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:476477"
/clone_lib="Soares mouse embryo NbME13.5 14.5"
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RESULT 15
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AUTHORS
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Matches 205; Conserv
Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               212 CAGGCCGCGCCGCCCCCCCCCCCCCCCAGGCCCCGGCCGGCCGAGCCCCTCCAGGTG 271
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
Plate: LLCM1778 row: i column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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High quality sequence stop: 642.
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a 81 «
                                                                                                                           /tissue_type="neuroblastoma"
/lab_host="neuroblastoma"
/lab_host="neur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:4894553"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone_lib="NIH_MGC_19"
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Score 182.2; DB 10; Pred. No. 5.8e-14;
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                                                             140 AACCCCCTGCAGGTCGGGGCTGAGCTCCAGTCCCGCTTCTTTGCCTCCCAGGGCTGCGCC 199
                                                                                                   109 GACTCCCGGGGGGTGGGCGTGCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAG 168
                       200 CAGAGTCCATTCCAGGCCG
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246
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Search completed: October 10, 2002, 20:27:35 Job time : 702.733 secs

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Listing first 45 summaries
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18.1 2561

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Match Length DB
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AAA11992
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AAX53491
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                                                                                                                                    Human small cell 1
Rabbit low density
S. cellulosum DNA
Mycobacterium tube
                                                                                                                                                                                                                                                                            Description
                                                        Human low density
Human low density
Human adenosine Al
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## ALIGNMENTS

RESULT 1 AAD11114 Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; myc-associated Zinc-finger protein; MAZ; cytostatic; synovial sarcoma; ds. AAD11114; AAD11114 standard; DNA; 2389 BP. Stockert E, Human small cell lung cancer associated gene, MAZ (LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CANCER RES. (CORR ) CORNELL RES FOUND INC. 19-JAN-2001; 2001WO-US02015. 24-SEP-2001 (first entry) 21-JAN-2000; 2000US-0489101. 26-JUL-2001. WO200153349-A2 Scanlan MJ, Jager Á 01d LJ, Gure ΑΟ, Chen

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AAX02974

Human Human

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC are cancer associated antigens expressed in patients afflicted with CC small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions CC characterised by the expression of one or more cancer associated CC expression of a hCAAP, and determine regression, progression or onset CC expression or characterised by expression of an abnormal amount of a CCAAP, and determine regression, progression or onset CC expression or characterised by expression of an abnormal amount of a CCAP and non-small cell lung cancer, melanoma, colon, breast, head CC and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a DNA encoding human myc-associated Zinc-finger CC protein MAZ. This small cell lung cancer associated gene is designated CCAP as NY-SCLC-5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by an isolated nucleic acid comprising an NA Group 3 or 4 molecule -
           12-NOV-2001
                                AAH26500;
                                                    AAH26500 standard; cDNA; 2561 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2389 BP; 419 A; 805 C; 731 G; 434 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 57; Page 92-94;
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                                                                                                           CGCCACTATCGCCGCGGCGG 500
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llarity 100.0%;
Conservative 0
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Pred. No. 1.5e-63;
; Mismatches 0;
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                                                                                                                                                                                                                    Query Match
Best Local :
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at risk for atherosclerosis, methods for evaluating an agent for use in treating atherosclerosis, and methods for treating a cell having an abnormality in structure or metabolism of LBP. Pharmaceutical compositions comprising an LBP polypeptide or nucleic acid, and vaccine compositions, are also claimed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence is that of cDNA encoding novel rabbit low density lipoprotein binding protein 1 (LBP-2, see AAB82807). The cDNA was isolated following screening of a rabbit cDNA library for clones encoding LBPs that bound to both native low density lipoprotein (LDL) and methyl LDL. The invention provides claimed polynucleotides encoding novel polypeptides which are capable of binding to native and methylated LDL, the isolated polypeptides, termed LBPs, and biologically active fragments and analogues of them, as well as expression vectors, cells and methods of producing the LBPs. Also claimed are methods of determining if an animal is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Low density lipoprotein binding protein 2; LBP-2; LDL; rabbit; atherosclerosis; antiarteriosclerotic; gene therapy; diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 4; Fig 2A; 143pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated low density lipoprotein binding polypeptide for treating, diagnosing and/or identifying therapeutic agents for atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-MAR-2000;
14-JUL-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
CGCCGCCTCTACGGTGGACAGAGCGGCCCCTGAAGCAGCCTCCGGCGCCCCCCTCCGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCCCAGAACCCCCTGCAGGTCGGGGCTGAGCTCCAGTCCCGCTTCTTTGCCTCCCAGGG 192
                                                                                                 GCCCGGCCCCGCGCAGCCGGGCCCCCGCGCGCAGCGGGCCGCGCCCTGGCCGCCGCCGCC
                                                                                                                                                                                                                                                                                       GGCCGAGCCCCTCCAGGTGGACTTGCTCCCGGTGCTCGCCGCCGCCCAGGAGTCCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                CTGCGCCCAGAGTCCATTCCAGGCCGCCGCCGGCCCCGCCCACGCCCAGGCCCCGGC 252
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DB; AAB82807.
                                                                                                                                                              BOSTON HEART FOUND INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2561 BP; 372 A; 937 C; 879 G; 373 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lees RS,
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2000US-0616289.
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54.8%;
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Pred. No. 2.7e-05;
0; Mismatches 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 2561;
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                                                                                                                                                                                                                                                                                                                                                                                                                             S. cellulosum DNA encoding polyketide and hereropolyketide enzymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA11992;
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AAA11992 standard; DNA; 37856 BP
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                                                                                                                                                                                                                                                                                                                                                                               Sorangium cellulosum
                                                                                                                                                                                                                                                                                                                                                                                                plant-protection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                        Polyketide biosynthesis; epothilone; cytotoxic; ii
                                                                                                                                                                                                                                                                                                                                                                                                                                               07-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     914
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                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                    20003..27889
/*tag= q
                                                                                                                                                                                                                                                                                                                        /note= "gtg start codon" complement (6374..7111)
              /product= "ORF12-regulation element"
complement (35255..35616)
                                                                                                                            /product= "ORF8-transpeptidase" complement (30040..31720)
                                                                                                                                                                                                                                                                                                  complement (8433..9550
                                                                                                                                                                                                                                                                                                                                                       complement (3398..6100)
                                                                                                                                                                                                                                         /product= "ORF4~ tyrosine/DOPA-Decarboxylase"
/note= "GTG start codon"
                                              /product= "ORF11-regulation
/note= "GTG start codon"
                                                                                                                                                                                                           /product= "ORF5-3-oxoacyl-ACP-reductase"
/note= "ACC start codon"
                                                                                                                                                                                                                                                                                                                                        /*tag= a
/product= "ORF1-tRNA synthetase"
                                                                                                                                                                                                                                                                                                                                                                ocation/Qualifiers
                                                                                                     'product= "ORF9-regulation element"
'note= "CGC stop codon"
                                                                                                                                                            'product= "ORF7-peptide synthetase"
                                                                                                                                                                                                                                                                                                         product= "ORF2-monooxygenase"
                                                                                                                                                                                    product= "ORF6-polyketide synthase"
                                                                                                                                                                                                                                   2212..13658
                                                                                                                                                                                                                                                                         product= "ORF3-aminotransferase"
note= "AGT start codon given in the specification"
                                                                                                    note= "CGC stop
                                                                                                                                                                                                                                                                   855..11393
                                                                        128..33613
                                                                               duct- "ORF10-transcription regulator"
                                                                                                                                                                                                                                                                                                                                                                                                       immunosuppressant; antibiotic; antifungal;
"ORF13-transcription regulator"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     492
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RESULT 4
AA199683/C
ID AA1996
XX AA1996
AC AA1996
XX
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DE Mycoba
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-APR-2000
        Mycobacterium tuberculosis strain H37Rv genome SEQ ID NO
                        15-JAN-2002
                                                        AA199683
                                                                                                                                                                                                                                                                                                           method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                        Claim 3; Page 20-33; 36pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-294101/26
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Beyer S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DE19846493-A1
                                                                                                                                                                                                             271
                                                                                                                                                                                                                                                                    Similarity
                                                        standard;
                                                                                                                                                                                                                                                            Conservative
                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98DE-1046493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98DE-1046493.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement (35730..36242)
                                                         DNA;
                                                                                                                                                                                                                                                                   16.2%;
                                                         4403765
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                                                         ВP
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29970 CCCGCCAGGGGCCACGTGGGAGGAGGCCGCCGCCGCGCACGAGGCG
                                                                                                                                                                                                                                                                 30090 GGCCGCGGAGCCGCCCGCGCCCCCGCGGCGGCGCGCCTTCCGTGGCCGCGGAGCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This invention describes a novel DNA sequence (I) whose expression products effect or are involved in the enzymatic biosynthesis, mutasynthesis or partial synthesis of polyketide or heteropolyketide compounds (II). (I) can be inserted into an expression vector and used to transform or transfect prokaryotic or eukaryotic cells with the aim of obtaining strains that produce large amounts of polyketide or heteropolyketide compounds, especially epothilones, which have cytotoxic and/or immunosuppressant and antibiotic and antifungal activities and are useful as plant-protection agents. This sequence represents the DNA sequence isolated from Sorangium cellulosum which is described in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA sequence coding for products involved in the biosynthesis of polyketide or heteropolyketide compounds, especially epothilone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 37856 BP; 5655 A; 13666 C; 12913 G; 5622 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GBFB ) GES BIOTECHNOLOGISCHE FORSCHUNG MBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACTIGCTCCCGGTGCTCGCCGCCCAGGAGTCCGCCGCGGCTGCTGCGGCCGCTGC 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCGGCCGAGGCCGCCCCCCCCCCCCCCCCCCACTATCGCCGCG
                                                                                                                                                                                                GGCCGCGCCTTCCGTGGCCGCGGAGTCGCCCGCGCCCTTCCGCGGCGGCGGCGCCCTTCCGT 30091
                                                                                                                                  /*tag= n
/product= "ORF14-transcription regulator"
/note= "GTG start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 81.2; DB 21
Pred. No. 0.00035;
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Db 3938160 CCATTGCCTCCCGCGCGCGCGTTGCCGCCGTTGCCGCCATTGCCGCCGCACCGCCGCCGCTG 3938101
                                                                    AAH26499
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                                                                                                                                                                                                                                                                                                                                      3938100 CCGCCGGTGCCGCCGTCGCCGGATCCGCCGACCCGGGGGTCGCCGAGGCCGCCGGTG 3938041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to evaluating strain variation within and between different populations of the tuberculosis bacterial pathogen, Mycobacterium tuberculosis or related Mycobacterium by determining the nucleotide sequence of the first strain at positions in the complete sequence of the genome that correspond to positions that differ in the nucleotide sequences of M. tuberculosis strains CDC 1551 (AAI99683) and macherical control of M. tuberculosis strains CDC 1551 (AAI99683) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Evaluating strain variation of Mycobacterium tuberculosis, comprises determining the nucleotide sequence of the strain at positions in the genome corresponding to positions where M. tuberculosis strains CDC 1551 and H37Rv differ \,
                     AAH26499;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H37Rv (AAI99682). The method is useful for evaluating strain variation M. tuberculosis and has valuable application in the fields of tuberculosis genetics, epidemiology, patient treatment and epidemic
                                                      AAH26499 standard; DNA; 1614 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4403765 BP; 757105 A; 1447799 C; 1441301 G; 757371 T; 189 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        at segdata.uspto.gov/sequence.html?DocID=6294328B1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            specification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 4; SEQ ID NO 2; 3pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-647261/74.
                                                                                                                                                              Fleischmann RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GENO-) INST GENOMIC RES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-JUN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mycobacterium tuberculosis; strain H37Rv; strain CDC 1551; genome; variation; epidemiology; patient treatment; epidemic monitoring; ds
                                                                                                                                                                                                                                                                                                      266 CAGGTGGACTTGCTCCCGGGTGCTCG---CCGCCCAGGAGTCCGCCCGCCGGCTGCTGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                     CATCGCCGCATTGCCGCCGCACCGCCGTGCCGCCGCCGCCGACCTCGCCGCCC 3937921
                                                                                                                                   TCGCCGCCGGTACCGCCGTTGCCGCCGTTGCCGCCATCGCCGCCAGTGTCGCCGCCAAGG 3937861
                                                                                                                                                                                                                                                                       CCGCCGGTGCCGGTGCCGCCGCCGCCCCCGTCCCCGCCGGTGCCGGTGCCGGTGCCG 3937981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequence data for this patent did not form part of the printed fication, but was obtained in electronic format directly from USPTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (AAI99682).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 80.8; DB 22; Pred. No. 0.00017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
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The present sequence is that of the coding region of the human gene (see also AAB36494) encoding novel human low density lipoprotein binding protein 2 (LBP-2 see AAB82806). The gene was isolated from a genomic DNA library using LBP-2 cDNA as probe. The LBP-2 protein predicted from the present sequence differs from that predicted from a cDNA clone (see AAB82803) in that it contains an additional 321 amino acids at its N-terminus (the cDNA is a 5' truncation). LBP-2 nucleic acids are among claimed polynucleotides of the invention that encode novel polypeptides capable of binding to native and methylated LDL. Also claimed are isolated LBP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polypeptides, and biologically active fragments and analogues of them, as well as expression vectors, cells and methods of producing the LBPs. Methods of determining if an animal is at risk for atherosclerosis, methods for evaluating an agent for use in treating atherosclerosis, and methods for treating a cell having an abnormality in structure or metabolism of LBP are claimed. Pharmaceutical compositions comprising an LBP polypeptide or nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1614 BP; 243 A; 638 C; 564 G; 169 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            acid, and vaccine compositions, are also claimed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 7; Fig 7A; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated low density lipoprotein binding polypeptide for treating, diagnosing and/or identifying therapeutic agents for atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-MAR-2000; 2000US-0517849
14-JUL-2000; 2000US-0616289
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-FEB-2001; 2001WO-US06356
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human low density lipoprotein binding protein 2 (LBP-2) DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Low density lipoprotein binding protein 2; LBP-2; LDL; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217 CGCGCGGCGCCCCCCACGCCCCAGGCCCCAGGCCGGCGAGCCCCTCCAGGTGGACTT 276
                                                                                                                                                                                                                                                                                               TGCTGCCGCCGTCGCTGCCGCCCCCGGCCCCTGCCGCCCTCTACGGTGGACACAGC 396
                                                                GCTCCCGGTGCTCGCCGCCCCAGGAGTCCGCCGCCGCTGCTGCCGCCGCCGCCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-565505/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      al Similarity
155; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15.8%; Score 78.8; DB 22; Length 1614; 55.0%; Pred. No. 0.0014; tive 0; Mismatches 127; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arjona AA;
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В
     The present sequence is that of genomic DNA encoding novel human low density lipoprotein binding protein 2 (LBP-2, see AAB82806). The DNA was isolated from a human genomic library by screening with LBP-2 cDNA (see AAH26494). The open reading frame spans 5 exons. Human LBP-2 nucleic acids are among claimed polynucleotides of the invention that encode novel polypeptides, termed LBPs, capable of binding to native and methylated LDL. Also claimed are isolated LBP polypeptides, and biologically active fragments and analogues of them, as well as expression vectors, cells and methods of
                                                                                                                                                New isolated low density lipoprotein binding polypeptide for treating, diagnosing and/or identifying therapeutic agents for atherosclerosis {\bf r}
                                                                                                                                                                                                                                                                                                                                         07-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                       exon
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human low density lipoprotein binding protein 2 (LBP-2) gene.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAH26495 standard; DNA; 12425 BP.
                                                                                                                                                                                                                                                     (BOST-) BOSTON HEART FOUND INC.
                                                                                                                                                                                                                                                                                        02-MAR-2000;
                                                                                                                                                                                                                                                                                                                28-FEB-2001; 2001WO-US06356
                                                                                                                                                                                                                                                                                                                                                                   WO200164874-A2
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                                                                                                                           Example 4; Fig 23; 143pp; English.
                                                                                                                                                                                                                                                                             14-JUL-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Low density lipoprotein binding protein 2; LBP-2; LDL; human;
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                                                                                                                                                                                        2001-565505/63
)B; AAB82806.
                                                                                                                                                                                                                           Lees RS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                            2000US-0517849.
2000US-0616289.
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2832..5153
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                                                                                                                                                                                                                                                                                                                                                                                                       995..5153
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                                                                                                                                                                                                                            Arjona AA;
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RESULT 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX53491 standard; DNA; 114955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3365
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-JUL-1999 (first entry)
                                                                    WPI; 1999-229400/19.
                                                                                                                                      Мусе JW;
                                                                                                                                                                                                   (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                        09-JUN-1998;
17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                      17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   457
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                                                                                                                                                                                                                                                                                                     98US-0093972
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55.0%;
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Pred. No. 0.00095;
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New antisense oligonucleotides used in treatment of, e.g. pulmonary

vasoconstriction

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 108945
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
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AAZ17263 standard; cDNA; 1337 BP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242 CAGGCCCCGGCGGCCGAGCCCCTCCAGGTGGACTTGCTCCCGGTGCTCGCCGCCGCCCCAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
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Thes 265; Indels
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В Qy

Matches 157;

Conservative

0; Mismatches 299; Score 77.2; Db 2

Indels Length 1337;

0;

Gaps

0;

DB 20;

Local Similarity

15.4%;

Sequence 1337 BP; 42 A; 577 C; 27 G; 22 T; 669 other;

peptide analogues and antagonists.

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The present invention describes a library of human polynucleotides CC comprising the sequences given in ARI1752 to ARI1779. Also described is CC a method of detecting differentially expressed genes correlated with the CC cancerous state of a mammalian cell, comprising detecting at least one CC differentially expressed gene product in a test sample from a cell causected of being cancerous, where the gene product is encoded by one CC polynucleotides can be used as a source of primers and probes, which can be used for a variety of purpose, e.g. detection of expression levels, CC mapping, tissue typing or profiling, forensics, genetic analysis and CC detection of polymorphisms. Polypeptides encoded by the polynucleotides can be used for raising antibodies for experimental, diagnostic and CC arrays for diagnostics (which may be used to determine function of a cencoded protein); and to detect differences in expression levels between two cells (e.g. to identify abnormal or diseased tissue in a human, to CC identify a genetic predisposition or susceptibility to a disease such as CC cancer). The polynucleotides of the invention are especially used in the CC cancer. The polynucleotides can also be used to screen for continuous and antagement of colorectal cancer, breast cancer, cancer, and polynucleotides can also be used to screen for contribute analyses and antagement of colorectal cancer, breast cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CIKVEL,
Escobedo J, Garr.
Jones WL, Kassam A, Ken
Jones G, Leshkowitz D,
Sudduth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-FEB-1998;
31-MAR-1998;
03-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Page 2250-2251; 2479pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel human genes and their expression products which differentially expressed in different cell types
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; gene; gene expression product; diagnosis; therapy; probe; detection; mapping; tissue typing; profiling; forensic; cancer; genetic analysis; colorectal cancer; breast cancer; lung cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-494092/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CHIR ) CHIRON (HYSE-) HYSEQ ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-APR-1998;
28-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human gene expression product cDNA sequence SEQ ID NO:4735.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R, Dickson M, Drmanac R, Drmanac S
Garcia PD, Garcia V, Giese K, Inn
Issam A, Kennedy GC, Kita D, Labat
Shkowitz D, Pot D, Randazzo F, Re
B, Sudduth-Klinger J, Williams LT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INC
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98US-0080114.
98US-0080515.
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98US-0072910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US01619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drmanac R, Drman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drmanac S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , Innis MA;
Labat I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Reinhard C;
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RESULT 9
AAX02974
AAX02956-X03048 and AAX22301-X22304 are overlapping BAC genomic sequences containing alternatively spliced forms of human IL-Ira. Such fragments are used in the method of the invention which describes the isolation of a novel human TANGO-77 encoding nucleic acid and protein Tango-77 is a member of the cytokine superfamily that is expected to inhibit inflammation by binding to the interleukin-1 receptor (IL-IR). may also bind to a new receptor so could regulate other cellular processes associated with acute or chronic inflammation, e.g. asthma, chronic myelogenous leukaemia, rheumatoid arthritis, psoriasis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tango-77; human; IL-1ra; cytokine superfamily; inflammation; inhibition; interleukin-1 receptor; IL-1R; regulation; asthma; rheumatoid arthritis; chronic myelogenous leukaemia; psoriasis; inflammatory bowel disease; growth factors; treatment; IL-1 receptor complex; BAC; ss.
                                                                                                                                                                Example 5; Figure 3; 226pp; English.
                                                                                                                                                                                                                                                WPI; 1999-153692/13.
                                                                                                                                                                                                                                                                               Pan
                                                                                                                                                                                                                                                                                                            (MILL-) MILLENNIUM BIOTHERAPEUTICS INC
                                                                                                                                                                                                                                                                                                                                             02-JUL-1998;
04-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                          03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9906426-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human IL-1ra BAC contiguous DNA sequence 19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAX02974;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAX02974 standard; DNA; 3198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           628
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      223 GGCGCCCCGCCCACGCCCCAGGCCCCGGCGGCCGAGCCCCTCCAGGTGGACTTGCTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    163 GCTCCAGTCCCGCTTCTTTGCCTCCCAGGGCTGCGCCCAGAGTCCATTCCAGGCCGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     isolated nucleic acid encoding the new human cytokine Tango-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CNNCNCCCCNCNCCCCCCNCNNNCNCNCCCCCCCCC 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCGCCCCCGCCTCCGCCGCCACTATCGCCGCGGC 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCCGTCGCTGCCGCCCCCGGCCCTGCCGCCCTCTACGGTGGACACAGCGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGCAGCCTCCGGCCCCCTCCGCCACCCCCGGCCAGTGTCGGCGCCCGCGGCCGAGGC
                                                                                                                                                                                                inhibit inflammation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                             98US-0091650
97US-0054646
                                                                                                                                                                                                                                                                                                                                                                                          98WO-US16102
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                                                                                                                                                                                               to screen for specific modulators
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AAV55831/c
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                                                                                                                                                                                                                                 W09822577-A1
                                                                                                                                                                                                                                                              Epstein-barr virus.
                                                                                                                                                                                                                                                                                             cancer; pathological condition; ss.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 3198 BP; 807 A; 847 C; 681 G; 846 T; 17 other;
                       WPI; 1998-312463/27
                                                      Masucci MG;
                                                                                                                    25-JUN-1997;
15-NOV-1996;
                                                                                                                                                                  17-NOV-1997;
                                                                                                                                                                                                  28-MAY-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                         18-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAV55831;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV55831 standard; DNA; 799
                                                                                     (MASU/) MASUCCI M G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              208 ATTCCAGGCCGCGCGCGCCCCCCCCCCAGGCCCCGGCGCCGAGCCCCTCCA 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          203;
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                                                                                                                      9605-0030986
                                                                                                                                                                   97WO-IB01508
                                                                                                                                      97US-0048945
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50.1%;
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inflammatory bowel disease. It may also induce or suppress interleukins, cytokines and growth factors. Modulators of this protein are used to treat or prevent conditions associated with abnormal levels of inflammation, or activity of IL-1 or its receptor complex.
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Score 75.6; DB 20; Pred. No. 0.0035; 195; Length 3198; ۲,

88 GGGGGTGGCCGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCCT 147

268 GGTGGACTTGCTCCCGGTGCTCGCCGCCGCCGAGGAGTCCGCCGCCGGCTGCTGCGGCCGC 327

Ş 밁 ρ Вр Š В QΥ В Ş 닭 Š Вb

B

GCC-----CCCCCGCCCCCCCCCCCCCCCCCCCCCACACCCCGGCCCACACGCAC 2987

3108 CCCGCCGGCGGGCGCCCCCCCCCCCCCCCGACCGC 3152 

Nucleotide sequence of the stabilising sequence-encoding insert.

Fusion protein; stabilising polypeptide; proteolytic degradation; resistance; half-life; autoimmune disease; inflammation; nitro drug; resistance; protein; inflammatory bowel disease; in vivo imaging; nitroreductase protein; enzyme therapy; prodrug therapy; protease;

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This is a nucleotide sequence of the stabilising sequence-encoding clasert. The invention provides a method for increasing the resistance of a core protein to proteolytic degradation that comprises linking or claserting onto or into the core protein a stabilising polypeptide of core protein to proteolytic degradation that comprises linking or classified into the core protein a stabilising polypeptide of coronals (Glya)X(Glyb)Y(Glyo)Zln where Glya, Glyb, Glyc are 1-6 coronals (Glya)X(Glyb)Y(Glyo)Zln where Glya, Glyb, Glyc are 1-6 coronals (Glya)X(Glyb)Y(Glyo)Zln where Glya, Glyb, Glyc are 1-6 coronals (Glya)X(Glyb)Y(Glyo)Zln where Glya, Glyb, Glyc are 1-6 coronals (Glya)X(Glyb)Y(Glyo)Zln where Glya, Glyb, Glyc are 1-6 coronals (Glya)X(Glyb)Y(Glyo)Zln where Glya, Glyb, Glyc are 1-6 coronals (Glya)X(Glyb)Y(Glyo)Zln where Glya, Glyb, Glyb, Alexandra (Glyb, Glyb)X(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)Y(Glyb)
07-NOV-2000
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                                                                                                  AAA50254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 799 BP; 201 A; 106 C; 479 G; 13 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Fig 4B; 120pp; English.
                                                                                                                                                                                                     AAA50254 standard; DNA; 1926 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    434
                                                                                                                                                                                                                                                                                                                                                                                                                                                              314 CTCCTGCCCTCCTGCCCCTCCTGCTCCTGCCCCTCCTGCTCCTGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        267 AGGTGGACTTGCTCCCGGTGCTCGCCGCCGCCGAGGAGTCCGCCGGCTGCTGCGGCCG 326
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   733 TECTGETECTGECTECTGETECTGECCCTCCTGCTCCTGCCCCTCCTGCCCCTCC 674
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGGGTGGGCCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            230;
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(first entry)
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48.78;
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DXXXXXID

Epstein Barr virus nuclear antigen 1 protein (EBNA1) DNA

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                                                                                                                                                                                                                                                                                                                       CC (EBV) nuclear antigen protein 1 (EBNA), see AAY95856). EBNA1 is CC (LEBV) nuclear antigen protein 1 (EBNA), see AAY95856). EBNA1 is CC utilised in a novel method for obtaining a eukaryotic cell that is CC stably transfected with at least one episome. This method involves CC transfecting a eukaryotic cell with: (1) a first episome comprising a comprising a eukaryotic cell with: (1) a first episome comprising a comprising a eukaryotic cell with: (1) a first episome comprising a comprising an EBV orip and a gene encoding a second episome comprising an EBV orip and a gene encoding a second episome comprising an EBV orip and a gene encoding a second episome comprising an EBV orip and a gene encoding a second protein, where comprising an EBV orip and a gene encoding a second protein, where comprising an EBV orip and a gene encoding a second protein, where comprising a may be comprised on the selection of the first protein to produce doubly transfected cells which also express an antigen that promotes retention of the episomes by the cells. The doubly transfected cells are maintained under conditions in which the collist and second proteins and the selectiable marker is maintained. Onder these conditions, only cells containing both episomes live. Preferably, EBNA1 is expressed from 1 of the episomes, and the protein of interest from the other episome. Either or both comprise an uncleic acid sequence encoding a corpotein desired to be expressed in the cell (e.g. a therapeutic collists and the cell (e.g. a therapeutic collists and the cell (e.g. a therapeutic collists applicable to cell culture or intent organisms, for gene therapy. It allows the rapid comprises a gene of interest, using a novel method of selection, and considered confirms and novel method of selection, and considered confirms and another of the selection without the need for exogenous considered confirms and another of the cells.
                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stably transfecting eukaryotic cells with at least one episome for the production of a desired protein in vitro and for gene therapy - \,
                                                                                                                                                                                                                                                                                                                    Sequence 1926 BP; 487 A; 352 C; 872 G; 215 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                selection factors, such as antibiotics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Horlick RA, Chelsky D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-FEB-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PHAR-) PHARMACOPEIA INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-FEB-2000; 2000WO-US03547.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Epstein-barr virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EBV; nuclear antigen 1; EBNA1; episome; transfection; selection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P-PSDB; AAY95856.
                                                                                                                                  27 TCCCGGTGTTTCCTTGCACGCTGCTGGCCCCCCCCTTCCCCGTGCTGGGCCTGGACTCCC 86
TGCAGGTCGGGGCTGAGCTCCAGTCCCGCTTCTTTGCCTCCCAGGGCTGCGCCCCAGAGTC 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000-515062/46
                                                                                      GGGGGGTGGGCGGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC 146
                                                                                                                                                                                                                              230;
                                                                                                                                                                                                                                                     Similarity
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                                                                                                                                                                                                                                                  14.98;
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                                                                                                                                                                                                                                                     Score 74.4;
Pred. No. 0.
                                                                                                                                                                                                                              Mismatches 241; Indels
                                                                                                                                                                                                                                                     4; DB 21;
0.0057;
                                                                                                                                                                                                                                                                      Length 1926;
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RESULT 12
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        The invention provides a composition comprising nucleic acid, histone HI protein and expression vector operationally encoding a protein suitable for tethering the nucleic acid to the histone HI protein, where the tethering protein is LANA. The composition is useful in aiding the retention of the viral DNA in the host cell. The viral vector encodes a protein suitable for tethering DNA to Histone HI. Methods for screening for compounds which are agonistic or antagonistic for the tethering of viral proteins to histone HI and DNA binding sites are useful for developing the method of viral transfer. The composition has applications
                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Histone H1; tethering protein; LANA; gene therapy; multiple sclerosis; Parkinson's disease; Huntington disease; diabetes; human herpesvirus EBV; latency-associated nuclear antigen; LANA; EBNA1; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF82902 standard; DNA; 1926
                                                                                                                                                                                                                                                                                                                01-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Epstein-barr virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EBV tethering protein EBNAl encoding DNA.
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                                                                                                                                            Disclosure;
                                                                                                                                                                                                                                                                                                                                        29-SEP-2000; 2000WO-US26908
                                                                                                                                                                                                                                                             Robertson
                                                                                                                                                                                                                                                                                    (UNMI ) UNIV MICHIGAN
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                                                                                                                                                                            composition for use in gene therapy comprises an expression vector hat includes a nucleic acid sequence encoding a nucleic acid bindi
gene therapy, including the treatment of multiple sclerosis,
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                                                                                                                                         Fig 9C; 60pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1926 BP; 487 A; 352 C; 872 G;
                                                                                                                                                                 Origin of replication; protein protein interaction; replication;
                                                                                                                                                                                   Nucleotide sequence of the Epstein Barr nuclear antigen
                                                                                                                                                                                                     15-JAN-2001
                                                                                                                                                                                                                                       AAA75454 standard; DNA; 2580
                WPI; 2000-593546/56.
                                                                   30-MAR-1998;
                                                                                    30-MAR-1998;
                                                                                                      05-SEP-2000
                                                                                                                        US6114111-A
                                                                                                                                         Epstein-barr virus
                                                                                                                                                          two-hybrid system; nuclear antigen; ss
                                                  (RIGE-) RIGEL PHARM INC
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                                Payan D,
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                                                                   98US-0050863
                                                                                     98US-0050863.
                                 Huang
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diabetes. The present of the Epstein-barr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241;
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Composition for detecting protein-protein interactions

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RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence represents the Epstein Barr nuclear antigen. It is used to produce bait vectors of the invention. The specification describes a compositions and methods for a genetic system of detecting protein-protein interactions in a mammalian host cell. The system comprises bait and test, both containing selection genes, and viral origin of replications which require bound viral replication proteins to effect replication. The compositions is useful for detecting an interaction between a bait protein and a test protein. It is useful in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1358
                             multiple gene expression; receptor; transporter protein; gene transcription factor; adhesion molecule; antisense therapy;
                                                   Anti-sense strand; plasmid pCMVEBNA; EBNA 1; episome; transfection; Epstein Barr Virus Nuclear Antigen 1; origin of replication; EBV orip; eucaryotic host cell; recombinant cell line; ion channel;
                                                                                                                        17-JAN-2000
                                                                                                                                                                  AAX90923 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1298
Epstein-barr virus
                                                                                                Anti-sense strand of pCMVEBNA plasmid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2580 BP; 632 A; 512 C; 1054 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Column 17-20; 18pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         two hybrid system comprises bait and test vector which selection gene, vector viral origin of replication and
                                                                                                                                                                                                                                                                                                                                                                               267
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mammalian two-hybrid system for detecting protein-protein interactions
                                                                                                                                                                                                                      CTCCTGCCCCTCCTCCTCCTCCTCCTGCCCCCTCCTCCTGCTCCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mammalian host cell.
                     amplification;
                                                                                                                                                                                                                                          CGCCCGCGAGGCCGCGCCCCCCCCCCCCCCCCACTATCGCCGCGGC
                                                                                                                                                                                                                                                                 CTGCCGCCGCTGCTGCCGCCGTCGCTGCCGCCCCCCGCCCTCTACGG 386
                                                                                                                                                                                                                                                                                                                                                       TGCCCCTCCTGCTCCTCCCTC-CTGCTCCTGCCCCTCCTGCCCCTCCTGCCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGGGTGGGCCTCATGAACTCCTTCCCGCCACCTCAGGGTCACGCCCAGAACCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCCGGTGTTTCCTTGCACGCTGCTGGCCCCCCCCCTTCCCCGTGCTGGGCCTGGACTCCC 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                       (first entry)
                                                                                                                                                                  DNA;
                     cell immortalisation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 74.4; DB 2
Pred. No. 0.0054;
0; Mismatches 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         382 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 21; Length 2580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        consist of fusion gene
                                         therapy;
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Matches
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Best Local
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1746
                                                                                                                                                                                                                                                                                    1567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5452 BP; 1108 A; 1736 C; 1246 G; 1362 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-610610/52.
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Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 1; Fig 1; 86pp; English.
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/product= "EBNA 1 protein"
/note= "Epstein Barr Virus Nuclear Antigen 1"
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48.78;
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Pred. No. 0.
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Best Local 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention describes a novel method for generating an antisense library targeted to a selected RNA transcript. The methods can be used for identifying antisense agents and for identifying target sites for antisense-mediated inhibition of a selected gene. The use of a direct library for target site selection significantly simplifies the screening process, since only very small libraries need be prepared and assayed. This sequence represents the vector pShuttle which is used in the method of the invention.
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06-NOV-1998;
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98US-0107504.
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Pred. No. 0.0043;
0; Mismatches 241; Indels 1;
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Search completed: October 10, 2002, 15:12:59
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Perfect score:
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1: /cgn2_6/ptodata/2,

2: /cgn2_6/ptodata/2,

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4: /cgn2_6/ptodata/2,

5: /cgn2_6/ptodata/2,

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Copyright (c) 1993 - 2002 Compugen Ltd
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US-07-885-972A-3
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US-08-98-136-1
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US-08-136-1
US-08-143-1
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ALIGNMENTS	US-09-443-501A-2	US-09-568-486-1	US-09-568-480-1	us-09-567-969-1	US-09-568-102-1	US-09-335-409-1	US-08-458-568A-11	US-08-843-659-1	US-09-259-821A-1	US-08-690-473-1	PCT-US91-07635-5	US-09-105-537-3	US-09-320-878-24	US-09-105-537-9	US-08-246-489-1	US-07-945-283-1	5215881-2
	Sequence 2, Appli	Ļ	1,	1	Sequence 1, Appli	Sequence 1, Appli	Sequence 11, Appl	Sequence 1, Appli	Sequence 1, Appli	Sequence 1, Appli	Sequence 5, Appli	Sequence 3, Appli	Sequence 24, Appl	Sequence 9, Appli	Sequence 1, Appli	Sequence 1, Appli	Patent No. 5215881

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Sequence 4, Application US/08362495 Patent No. 6087171 GENERAL INFORMATION:
                                                        TELEFAX: 202-408-4400
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 1309 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIIM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Neuman, Toomas
APPLICANT: Suda, Xikuo
APPLICANT: No. 6087171nes, Howard O.
TITLE OF INVENTION: METHOD FOR INDUCING DNA SYNTHESIS
TITLE OF INVENTION: NEURONS
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                              NAME: Barker, M. Paul
REGISTRATION NUMBER: 32,013
REFERENCE/DOCKET NUMBER: 05
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-408-4000
                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 08/301,416
FILING DATE: 08-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/169,522
FILING DATE: 15-DEC-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 18-NOV-1990
FILING DATE: 435
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: WO PCT/US94/14614
                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: WO PFILING DATE: 19-DEC-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: Finnegan, Henderson, Farabow, Garrett ADDRESSEE: Dunner, L.L.P. STREET: 1300 I Street, N.W. CITY: Washington STATE: D.C. COUNTRY: U.S.A. 21P: 20005-3315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/01
FILING DATE: 18-NOV-1996
                                    nucleic acid
linear
              single
                                                                                                            ID NO: 4:
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RESULT 2
US-07-885-972A-3/c
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                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 29-NOV-1990
                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/620,859
FILING DATE: 29-NOV-1990
                                                                                                                                                                                                     CLASSIFICATION: 435
PRIOR APPLICATION UMBER: US 07/621,092
FILING DATE: 26-NOV-1990
                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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APPLICANT:
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                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Expression of PACE in Host Cells and TITLE OF INVENTION: Methods of Use Thereof NUMBER OF SEQUENCES: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: UPPLICATION NUMBER: UPPLIC
                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
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APPLICATION NUMBER:
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Spring House
: Pennsylvania
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Kaufman, Rnadal J.
Tekamp-Olson, Patricia
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                                                                          US 07/621,443
  US 07/621,457
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Pred. No. 1.1e-16;
0; Mismatches 132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1309;
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             CLASSIFICATION: 435
CLASSIFICATION DATA:
PRIOR APPLICATION UNMBER: US 08/
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 07/
FILING DATE: 20-MAY-1992
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APPLICANT:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-540-9206
                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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LENGTH: 4405 base pairs
TYPE: NUCLEIC ACID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
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LOCATION:
                                                                                                                                                                                                                                                    OPERATING SYSTEM:
SOFTWARE: Patentl
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                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                   APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
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APPLICATION NUMBER:
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Brake, Anthony J.
Kaufman, Rnadal J.
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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56.7%;
us 07/621,092
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SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
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APPLICANT: Wong, Polly A.
TITLE OF INVENTION: Expression of PACE in Host Cells and
TITLE OF INVENTION: Methods of Use Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: Spring House Corporate Center, P.O. Box CITY: Spring House STATE: Pennsylvania
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us 07/885,972
                                      US 08/480,382
                                                                                                                       US/08/745,880
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                                                                                                                                                                  Version #1.25
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61; Indels
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PRIOR APPLICATION DATA:

26-NOV-1990

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, App1
Patent No. 59860
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APPLICANT:
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REFERENCE/DOCKET NUMBER: GIETELECOMMUNICATION INFORMATION:
TELEPHONE: 215-540-9266
TELEPAX: 215-540-5818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/621,457
FILING DATE: 30-NOV-1990
ATTORNEY/AGENT INFORMATION:
                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
                                                                                                                                                                                                                                               APPLICANT: Wong, Polly A.
TITLE OF INVENTION: Expression of PACE in Host Cells and
TITLE OF INVENTION: Methods of Use Thereof
SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: DNA (genomic)
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                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            454 TGCCTGGCCGAGCACGGCCAC 474
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LOCATION:
                                                                                                                                                    STREET: Spring House
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89 GGCCTCGGCCCGGCGGCGAC 69
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                                                                                                                      COUNTRY:
                                                                                                                                                                                              ADDRESSEE:
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                                                                                                          19477
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                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/08480382
                                                                                                                                          Pennsylvania
                                                                                                                                                                          E: Howson & Howson
Spring House Corporate Center, P.O. Box 457
                                                                                                                                                                                                                                                                                   Wasley, Louise Wong, Polly A.
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Brake, Anthony J.
Kaufman, Rnadal J.
Tekamp-Olson, Patricia
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                                                                                                                      U.S.A.
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29-NOV-1990
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56.7%;
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Pred. No. 0.32;
0; Mismatches 61; Indels 0
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                                                                                                                                                                                                                              Sequence 1, Application US/08486343A
Patent No. 6071695
GENERAL INFORMATION:
APPLICANT: OZKAYNAK, ENGIN
APPLICANT: OPPERMANN, HERMANN
APPLICANT: OPPERMANN, HERMANN
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INFORMATION FOR SEQ ID NO: 3:
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FILING DATE: 26-NOV-1112
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/620,859
APPLICATION NUMBER: 29-NOV-1990
                                                                                                                        TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR MODULATING TITLE OF INVENTION: MORPHOGENIC PROTEIN EXPRESSION NUMBER OF SEQUENCES: 7

CORRESPONDENCE ADDRESS: ADDRESS: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES ADDRESSEE: INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/621,457
FILING DATE: 30-NOV-1990
ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER: US 07/621,443
FILING DATE: 29-NOV-1990
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PRIOR APPLICATION DATA:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 4405 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                       STREET: 45 SOUTI
CITY: HOPKINTON
STATE: MA
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REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 07-JUN
                                       COUNTRY: U
ZIP: 07148
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                                                                                                         45 SOUTH STREET
                                                       USA
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REFERENCE/DOCKET NUMBER: CRI
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)-248-7000
TELEPAX: (617)-248-7100
INFORMATION FOR SEQ ID NO: 1:
            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM CC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                    TITLE OF INVENTION: ME
TITLE OF INVENTION: MO
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
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ORIGINAL SOURCE:
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NAME: PITCHER, Edmund R
REGISTRATION NUMBER: 27,8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2493 CCCACCGCGTCCGCAGCCCACCCGTCCTGCTCGGGCCCCTTCCTGGTCCGGACCGCGA 2552
                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2733 CGCGG 2737
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2553 GTGCCGAGAGGCCAGGCCCGGCTCCGATTCCTCCAGCCGCATCCCCGCGACGTCCCGCCA 2612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                206 CCCAGAGCGACCCTCCGGTCAATTGTTGGGCTCGGGGAGTGTCGCGCTGCCCCGAGCGCGC 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  446 CGCTG 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         326 CCCTCGCTCGCCCCAGCGGGTTCGCTCGCGTAGAGCGCAGGGCGCGCGATGAAGGCGG 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      266 CGGGCGCGGAGGCAAAGGGAGCGGGACCGGGACGGGGCCCGGAGCTTGCCT 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                             CITY: HOPKINTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                      COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
  APPLICATION NUMBER:
                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                       ADDRESSEE: PATENT ADMINISTRATOR, CREATIVE BIOMOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/486,343A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119;
                                                                                                                                     07148
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                                                                                                                                                                                                                  45 SOUTH STREET
                                                                                                                                                        USA
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N: 435
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48.6%;
                                                                                                                                                                                                                                                                                                               MORPHOGEN EXPRESSION
                                                                                                                                                                                                                                                                                                                                METHODS AND COMPOSITIONS FOR MODULATING
PCT/US95/07349
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TITLE OF INVENTION: RECOMBINANT NARBONOLIDE POLYKETIDE SYNTHASE
FILE REFERENCE: 300622002120
CURRENT APPLICATION UNMBER: US/09/320,878A
CURRENT FILING DATE: 1999-05-27
EARLIER APPLICATION NUMBER: CIP OF 09/141,908
EARLIER FILING DATE: 1998-08-28
EARLIER FILING DATE: 1998-05-06
EARLIER APPLICATION NUMBER: CIP OF 09/073,538
EARLIER APPLICATION NUMBER: CIP OF 08/846,247
EARLIER APPLICATION NUMBER: CIP OF 08/846,247
EARLIER APPLICATION NUMBER: 60/119,139
EARLIER FILING DATE: 1997-04-30
EARLIER FILING DATE: 1998-05-06
EARLIER FILING DATE: 1999-02-08
EARLIER FILING DATE: 1999-03-20
EARLIER APPLICATION NUMBER: 60/087,080
EARLIER APPLICATION NUMBER: 60/087,080
EARLIER APPLICATION NUMBER: 60/087,080
EARLIER APPLICATION NUMBER: 60/087,080
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
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US-09-320-878-21/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL
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Patent No. 6117659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: ASHLEY, Gary
APPLICANT: BETLACH, Melanie C.
APPLICANT: BETLACH, Mary C.
APPLICANT: MCDANIEL, Robert
APPLICANT: TANG, Li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (508)-435-9001
TELEFAX: (508)-435-0992
INFORMATION FOR SEQ ID NO: 1:
NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 17415 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/938,021
FILING DATE: 28-AUG-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2733 CGCGG 2737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2493 CCCACCGCGGTCCGCACCCGTCCTGCTCGGGCCGCCTTCCTGGTCCGGACCGCGA 2552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2613 GGCTCTAGGCACCCCGTGGGCACTCAGTAAACATTTGTCGAGCGCTCTAGAGGGAATGAA 2672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2553 GTGCCGAGAGGGCAGGGCCGGCTCCGATTCCTCCAGCCGCATCCCCGCGACGTCCCGCCA 2612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           446 CGCTG 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           386 TGAGCCCGGTGCGCCCTCGGGCCGCAAGGCGCCGTCGGGCTGCGGCGGCGGGGAGCTGG 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               266 CGGGCGCGGAGGCAAAGGGAGCCGGACCGGGCCGGGACCGGAGCTTGCCT 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      206 CCCAGAGCGACCCTCCCGTCAATTGTTGGGCTCGGGAGTGTCGCGGTGCCCCGAGCGCGC 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: KELLEY, ROBIN D
REGISTRATION NUMBER: 34,637
REFERENCE/DOCKET NUMBER: CR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09320878A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches 126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CRP-091PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 0.34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 17415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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; LENGTH: 5970
TYPE: DNA
; ORGANISM: Streptomyces venezuelae
US-09-320-878-21
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                                             TELEFAX: 508-872-5415
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5733 TGAGGTCCCGGTGTCCCCAGCGGTCCCTGGCGTCTCCGGTGGTCCCGGCGGTCCTGGCGT 5674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5793 TCCCGGCGGTCTGGTCTCCCCGGGCGCACCGGGTGCAACTCGGGCGGTCCCGGCGGTCCC 5734
               SEQUENCE CHARACTERISTICS:
LENGTH: 14060 base pai
                                                                         REFERENCE/DOCKET NUMBER: GE
TELECOMMUNICATION INFORMATION:
TELEPHONE: 508-872-8400
                                                                                                                                                 CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                               CURRENT APPLICATION DATA: APPLICATION NUMBER: US
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5673 CTCCGGGTGCCGCACCGGGCGCCTCGGGCGCCTCGGGCGGTCACGGAGGTCCCCCATGGCA 5614
                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               339 CAGCGGGTTCGCTCGCGTAGAGCGCAGGGCGCGCGCGATGAAGGCGGTGAGCCCCGGTGCG 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         219 TCCCGTCAATTGTTGGGCTCGGGAGTGTCGCGGTGCCCCGAGCGCGCGGGCGCGGAGGC 278
                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                     STREET: CALL
CITY: FRAMINGHAM
CITY: FRAMINGHAM
                                                                                                                    NAME: LASSEN, ELIZABETH REGISTRATION NUMBER: 31,
                                                                                                                                                                                                                                                                                                            ZIP: 0170:
                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                             SOFTWARE:
                                                                                                                                                                                                                                                                                                                      COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129;
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: 14060 base pairs nucleic acid
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                                                                                                                                                                                                                                                                                                                                                                 ONE MOUNTAIN ROAD
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BURN, TIMOTHY C
                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                               QIAN, FENG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                            508-872-5415
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GERMINO,
                                                                                                                                                                                                                            PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                   GENZYME CORPORATION
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47.4%;
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                                                                                                                    31,845
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                                                                                                       GEN4-17.8
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US-08-804-227C-7/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: Plant, Thomas, G.
REGISTRATION NUMBER: 35,784
REFERENCE/DOCKET NUMBER: X-1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 317-276-2459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE
                                                                                                                                                                                                                                                                                                       SOFTWARE: ASCI(DOS) Text only CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: CDNA
FEATURE:
                                              FEATURE:
                                                          TOPOLOGY: 11
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            309
             NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
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                                                                                        STRANDEDNESS;
                                                                                                     TYPE:
                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                    COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                  ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                  46285
                                                                                                    nucleic acid
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                                                                       linear
                                                                                                                                                                                                                                                                                                                                                  E: Floppy disk
IBM Compatible
               CDS
350..14002
                                                                                                                                                                                                                                                                         February 21,
                                                          DNA (genomic)
                                                                                      single
                                                                                                                                                                                                                                                                                                                                      MS-DOS
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US/08/804,227C

X-8231

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GENERAL INFORMATION:

APPLICANT: LOHOOF, Bradley S.

APPLICANT: ROSTECK, Paul R., Jr.

APPLICANT: Sutton, Kimberly L.

APPLICANT: SUTTON, COLUMN STATES COLUMN STATES STATES COLUMN STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STATES STAT
                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: THOMAS G. PLANT 1501
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              429 CGGCGGCGGGAGCTGCCCTGCCTGCCTGCCCGA 464
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       369 GCGCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGCCGCAAGGCGCCGTCGGGCTG 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   249 CGGTGCCCGAGCGCGCGGGCGCGGAGCCAAAGGGAGCCGGAGCCGGCCGGGACGGGGC 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7, Application US/08804227C o. 5876991
LILLY CORPORATE CENTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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RESULT 10
US-08-804-198-1/c
; Sequence 1, Application US/08804198
; Patent No. 5945320
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         CLASSIFICATION: 435
CTASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CANTRELL, PAUL R.
REGISTRATION NUMBER: 36,470
REFERENCE/DOCKET NUMBER: P911
TELECOMMUNICATION INFORMATION:
TELEPHONE: 317-276-3885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
INFORMATION FOR SEQ ID NO:
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LOCATION:
FEATURE:
                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: PAUL R. CANTRELL 1:
STREET: LILLY CORPORATE CENTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Burgett, Stanley APPLICANT: Kuhstoss, Stuart APPLICANT: Rao, Nagaraja R.
                                                                                                                                                                    OPERATING SYSTEM: Macintosh 7.0 SOFTWARE: Microsoft Word 5.1 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Rosteck, Paul R., Jr.
TITLE OF INVENTION: PLATENOLIDE SYNTHASE GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
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                                                                                                                                    APPLICATION NUMBER: US/08/804,198 FILING DATE:
                                                                                                                                                                                                                                                                                           COUNTRY:
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36155..41830
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20110..31284
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14046..20036
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48.0%;
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                                                                                              EARLIER APPLICATION UMBER: 60/106/100
EARLIER FILING DATE: 1998-10-29
NUMBER OF SEQ ID NOS: 12
SOFTMARE: Patentin Ver. 2.1
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/09428517 Patent No. 6251636
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Best Local .
                                                                                                                                                                                                                                                                                   APPLICANT: Betlach, Mary C.
APPLICANT: Shah, Sanjay Krishnakant
APPLICANT: McDaniel, Robert
APPLICANT: Tang, Li
TITLE OF INVENTION: RECOMBINANT OLEANDOLIDE POLYKETIDE SYNTHASE
FILE REFERENCE: 30062-20029,00
                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/428,517
CURRENT FILING DATE: 1999-10-28
EARLIER APPLICATION NUMBER: 60/28
EARLIER FILING DATE: 1999-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43062 CCGGGGCGGCCAGCGC 43047
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                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43122 CTCTGCGGGCGGTGGTGCGCGCGCGCGCGCGCGCCTGGGCCGGGGCGTACCGGCTGAGCA 43063
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OTHER INFORMATION: Description of Artifical Sequence: Recombinant DNA
                                                                                  ENGTH: 50937
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LENGTH: 44377 base pairs
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LOCATION:
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STRANDEDNESS: single
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350..14002
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48.0%;
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Pred. No. 0.4; 
0; Mismatches 133; Indels 0;
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                                                              ; TOPOLOGY: 11; MOLECULE TYPE: US-08-658-136-2
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US-08-658-136-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Query Match 8.6
Best Local Similarity 50.0
Matches 108; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                      INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 53526 base pairs
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APPLICANT:
APPLICANT:
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APPLICANT:
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                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: 508-872-8400
                                                                                                                                                                                                                                     CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: LASSEN, ELIZABETH
REGISTRATION NUMBER: 31,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: GENZYME CORPORATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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                                                                                                                                                                       TELEPHONE: 508-872-5415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: FRAMINGHAM
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                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
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LANDES, GREGORY M
BIRN, TIMOTHY C
"TMOTHY C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DACKOWSKI, WILLE.
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QIAN, FE
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                                                                                             linear
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                                                                             DNA (genomic)
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               8.68;
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Score 43.2; DB 3; pred. No. 0.4; 0; Mismatches 108;
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Pred. No. 0.4;
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                               Length 53526;
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; MOLECULE TYPE:
US-08-658-136-1
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Patent No.
                                                                                        Matches
                                                                                                     Query Match
Best Local
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                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS: LENGTH: 53577 base pairs TYPE: nucleic acid
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TITLE OF INVENTION: POLYCYSTIC KIDNEY DISEASE GENE
NUMBER OF SEQUENCES: 58
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 508-872-8400
                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: LASSEN, ELIZABETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                              CURRENT APPLICATION DATA:
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249 CGGTGCCCCGAGCGCCGCGGGCGCGAGGCAAAGGGAGCCGACCGGCCGCGGACGGGCC 308
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CITY: I
STATE:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 31, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE:
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LANDES, GREGORY M
BURN, TIMOTHY C
                                                                                        Conservative
                                                                                                                                                                                 linear
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                                                                                                                                                               DNA (genomic)
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                                                                                                     50.0%;
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                                                                                                     Score 43.2; DI Pred. No. 0.4;
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                                                                                          Mismatches 108;
                                                                                                                     DB 3;
                                                                                                                   Length 53577;
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GENERAL INFORMATION:
APPLICANT: Pan, Yang
TITLE OF INVENTION: AND USES THEREOF
FILE REFERENCE: 09404/052001
CURRENT APPLICATION NUMBER: US/09/128,155
CURRENT FILING DATE: 1998-08-03
EARLIER APPLICATION NUMBER: US 60/091,650
EARLIER APPLICATION NUMBER: US 60/094,646
EARLIER APPLICATION NUMBER: US 60/054,646
EARLIER APPLICATION NUMBER: US 60/054,646
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US-08-034-650-9
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US-09-128-155-16/c
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LENGTH: 152331
                                                                                        Sequence 9, Application US/08034650 Patent No. 5641671 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: (1)...(152331)
OTHER INFORMATION: n = A,T,C or
                                                                                                                                                                                                                           21931 GCGCGGCCCGCNCGGGGCGG 21912
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APPLICANT: BOS, Jannetje W. APPLICANT: FRENKEN, Leon G. APPLICANT: VERRIPS, Cornelis T. APPLICANT: VISSER, Christiaan TITLE OF INVENTION: PRODUCTION O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3761 CTGCGGCCCAGCGCCCGGCGCGCCTGCCGCGTCAA 3796
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PRODUCTION OF ACTIVE PSEUDOMONAS GLUMAE
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Pred. No. 0.47;
0; Mismatches 136; Indels
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Search completed: October 10, Job time: 165.733 secs
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TELEX: 6714627 CUSH
INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 2900 base pairs
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APPLICATION NUMBER: US 07/727,235
FILING DATE: 03-JUL-1991
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SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                   1801 CGCGCTGGCTCGCATGCGCCG 1825
                                                                                                                                                                                                       1681 GCCCGCCGCCCCGTCGCCCGCGCCGGCCGCCGTCGCCGGCCGGCCGGCCGGCCGT 1740
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ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                      414
                                                                                                                                                                                                                                                                                                                                                                      234 GGCTCGGGAGTGTCGCGGTGCCCCGAGCGCCGGGCCGGAGGCAAAGGGAGCGGAGCC 293
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                                                                                                                                                                                                                                                                                                      294 GGCCGCGGACGGGCCCGGAGCTTGCCTGCCTCGCTCGCCCCAGCGGGTTCGCTCG 353
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                    CAGCCTGGGTGGCTCCGCAGCCGCG 498
                                                                                                                                                                    CGTAGAGCGCAGGGCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGCCGCAA 413
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1559..2617
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202) 822-0944
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47.5%;
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                  2002, 17:54:40
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Pred. No. 0.46;
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BF058188 7k28a07.x
BF434156 7099d11.x
BF434156 7099d11.x
BF434156 7099d11.x
BM128092 if09e06.y
AW917296 EST348000
BI544850 603242167
BE957362 UI-M-BG2-BE915258 7078a10.x
BF115258 7080605.x
AW123196 UI-M-BH2.AW480072 zv42a07.r
BE948581 UI-M-BH3-BE948581 UI-M-BH3-BE

BF464571 ÚI-M-CGOP BE981185 UI-M-CGOP BF711124 MI-P-X1-AW12234 UI-M-BH2. AW12234 UI-M-BH2. AI835078 UI-M-AI1-AI43150 EST240444 BF436113 nab77-05. BF514130 UI-H-BW1-BF523595 UI-R-C1-K BF393965 UI-R-CA-K BF393965 UI-R-CA-K BF393965 UI-R-CAO-AA410247 zv32e02.r

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Minimum
Maximum
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No.
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Maximum Match 100%
Listing first 45 summaries
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   450.2

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299.2

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Copyright (c) 1993 - 2002 Compus
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B2377284 hw10a02.x
B1598458 603246969
AW028893 wv97c12.x
BF711180 MI-P-AX1-BF710496 MI-P-AX1-BF710496 MI-P-AX1-BF709496 MI-P-AX1-BF709496 MI-P-AX1-BF709496 MI-P-AX1-BF709496 MI-P-AX1-BF709496 MI-P-AX1-
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AI791586 oj38h08.y
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BI552992 603193628
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                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI), Sh
Toshiyuki and Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 843)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                            found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
plate: LLAM11720 row: j column: 16
High quality sequence stop: 739.
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/db_xref="taxon:9606"
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BF115258

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BA637626

BA637626

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                            Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Mixlos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI),
Toshiyuki and Plero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 570)
                                                                                                                                          NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                          Homo sapiens
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DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
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Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                     EST
                                                                                                  BG337080
BG337080.1 GI:13143518
                                                                                                                                       mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="Organ: brain; Vector: pBluescriptR (modified pBluescript KS+); Site_1: BamHI; Site_2: Sal-1-XhoI (gtcg pBluescript KS+); Site_1: BamHI; Site_2: Sal-1-XhoI (gtcg ); Oligo-dr primed using primer 5'-TTTTTTTTTTTTTVN-3' size-selected for average insert size 2.5 kb and normalized to ROT 5. This is a primary library enriched for full-length clones and constructed using the cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/NHGRI, National Institutes of Health). Note: this is a NIH_MGC Library.
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/db_xref="taxon:9606"
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/lab_host="DH10B"
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/clone_lib="NIH_MGC_95"
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cDNA clone IMAGE:4552357
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                                                 GCGGCGGCGGGAGCTGGCGCTGCCTGGCCGAGCACGG-CACAGCCTGGGTGGCT
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1 (bases 1 to 911)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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Tissue Procurement: ATCC
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Location/Qualifiers
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
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1 274 c
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/tissue_type="leiomyosarcoma cell line"
/lab_host="DH10B (phage-resistant)"
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/db_xref="taxon:9606"
/clone="IMAGE:4552357"
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Pred. No. 8.5e-63;
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                                         68 CCGATCGGGCTTAGTCGGAGCTCCGAAGGGAGTGACTAGGACACCCGGGTGGGCTACTTT 127
                                                                                         GGCGCGGTTGTGAGTAGTACCGGGAGTGGGGTGATCCCGGGGCTAGGGGAGCGCGGCGGCC
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WashU-NCI human EST Project
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512 bp mRNA linear EST 09-NOV-1999 au91g11.yl Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783684 5' similar to SW:ID4_MOUSE P41139 DNA-BINDING PROTEIN INHIBITOR ID-4. [1]; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -40RP from Gibco
High quality sequence stop: 309.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1810
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1997)
Other_ESTs: au91g11.x1
Contact: Wilson RK
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Mammalia; H
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                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                 Science Park, Trie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: brain; Vector: pBluescript SK (Stratagene); Site_1: Sati; Site_2: XhOI; Double-Stranded CDNA was prepared from human fetal brain tissue. 5' and 3' adaptors were used in cloning as follows: 5' adaptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="frontal lobe"
/dev_stage="5 months post-conception"
/lab_host="DHIOB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2783684"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="Schneider fetal brain 00004"
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93.2%;
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Primates;
                                                                                                                                                                                                           Score 408; DB 9;
Pred. No. 3.5e-59;
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                                                                                                                                                                                                          Bonaldo, Ph.D.

CDNA Library Arrayed by: Greg Lennon, Ph.D.

CDNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:

www-bio.llnl.gov/bbrp/image/image.html

Tnsert Length: 590 Std Error: 0.00
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1 (bases 1 to 531)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP)BTGAP), Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A1146316 S31 bp mRNA linear EST 23-OCT-199 qa03f06.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:1685699 37 similar to SW:ID4_MOUSE P41139 DNA-BINDING PROTEIN INHIBITOR ID-4. [1]; contains MER22.t3 TAR1 MER22 repetitive element; , mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
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Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 280.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1998)
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                               /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:1685699"
/clone_lib="NCI_CGAP_Brn23"
/tissue_type="glioblastoma (pooled)"
/lab_host="DH10B"
/note="Organ: brain; Vector: pT7T3D-Pac (Pharmacia) with
modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st
                                                                                                                                                                               ocation/Qualifiers
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Oj38h08.y5 NCI_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1500639 5', similar to SW:ID4_HUMAN P47928 DNA-BINDING PROTEIN INHIBITOR ID-4.; contains MER22.b3 TAR1 repetitive element; mRNA sequence.
cDNA Library Preparation: M. Bento Soares, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D.,
Emmert-Buck, M.D., Ph.D.
                                                                                                                                                 Unpublished (1997)
Other_ESTs: oj38h08.x5
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 522)
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Pred. No. 5.2e-57;
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Original CIC.
information
information
This 5' rese
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                                                                                                                                                  BI546228 826 bp mRNA linear EST 05-58 603188614F1 NIH_MGC_95 Homo sapiens cDNA clone IMAGE:5260155
Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 826)
                                                                                                                    mRNA sequence.
BI546228
                                                                                                  BI546228.1
                                                                  numan
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-*organ: kidney; Vector: pT/T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Ecc RI; 1st strand cDNA was primed with a Not I - oligo(dT) primer; double-stranded cDNA was ligated to Ecc RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Ecc RI sites of the modified pT/T3 vector. mRNA source: 2 pooled kidneys. Library went through one round of normalization. Library constructed by Bento Soares and M. Fatina Bonaldo. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:1500639"
/clone_lib="NCI_CGAP_Kid3"
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200 c 172 g
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99.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 644
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Pred. No. 1.5e-52;
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Tissue procurement: Miklos Palkovits, M.D., Ph.D.
Tissue procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiroshiyuki and Piero Carninci (RIKEN)
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lnl.gov
plate: LLAM/11655 row: k column: 04
High quality sequence stop: 821.
Location/Qualifiers
1 266
                                                                                                                                                         AAAGATTCCATCGTAAAACCCAGAGCGACCCTCCCGTCAATTGTTGGGCTCGGGAGTGTC
                                                                                                                                                                                                                                                                                                       AAAGATTCCCTCGTAAAAACCCAGAGCGACCCTCCCGTCAATTGTTGGGCTCGGGAGTGTC
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                               TCGGGCTGCGGCGTGCGGGAGCTGGCGTGCCTGGCCGAGCACGGCCACAGCCT
                                                            TCGGGCTGCGGGG-GCGGGGAGCTGGCGCTGCCTGGCCGAGCACGGCCACAGCCT
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National Institutes of Health, Ma
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5260155"
/clone=lib="NIH_MGC_95"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="hippocampus"
/lab_host="DH10B"
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Pred. No. 1.7
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1.7e-52;
7;
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ORGANISM
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BE327284
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TITLE
                                                                                                                                                                                                                                                                                               Matches 369;
                                                                                                                                                                                                                                                                                                                               Query Match
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hw10a02.x1
similar to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D.,
Emmert-Buck, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 421.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA Library Preparation: M. Bento Soares, Ph.D. CDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL, send email to: info@image.llnl.gov
Seq primer: -400F from Gibco
                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:3182474"
/clone_lib="NCI_CGAP_Lu24"
/tissue_type="carcinoid"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                        /note="Organ: lung; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Plasmid DNA from the normalized library NCI_CGAP_LU5 was prepared, and so circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (cloneIDs 1414920-1417991 and 1520904-1522439). Subtraction by Bento Soares and M. Fatima Bonaldo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .472
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99.7%;
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                                                                                                                                                                                                                                                                                       Score 358; DB 10;
Pred. No. 8.2e-51;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                         Length 472;
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NGE:3182474 3'
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BI598458
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     371 GCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGCCGCAAGGCGCCCCTCGGGCTGCG
                                                                       GCCCCGGTTGTGAGTACCGGGAGTGGGGTGATCCCGGGCTAGGGGAGCGCGGCG--C
GCGATCGGGCTTAGTCGGAGCTCCGAAGGGAGTGACTAGGACACCCGGGTGGGCTACTTT
                          CCGATCGGGCTTAGTCGGAGCTCCGAAGGGAGTGACTAGGACACCCGGGTGGGCTACTTT 127
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                                                                                                                                                          al Similarity
349; Conser
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1 (bases 1 to 817)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMI1745 row: i column: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits,
cDNA Library Preparation: Michael J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium
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Contact: Robert Strausberg, Ph.D.
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                                                                                                                                                                                                                                         /note="Organ: brain; Vector: pBluescriptR (modified /note="Organ: brain; Vector: pBluescript RS+); Site_1: BamHI; Site_2: SalI-XhOI (gtcgag ); Oligo-dr primed using primer 5'-TTTTTTTTTTTTTTTVN-3', size-selected for average insert size 2.3 kb and normalized to ROT 5. This is a primary library enriched for full-length clones and constructed using the Cap-trapper method (Carninci, in preparation). Library constructed by M. Brownstein (NIMH/NHGRI, National Institutes of Health). Note: this is a NIH_MGC Library." a 223 c 316 g 120 t
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5294681"
/clone_lib="NIH_MGC_96"
                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="hypothalamus"
/lab_host="DH10B"
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92.3%;
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Pred. No. 5.2e-41;
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Brownstein
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Best Local
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                                                     Local Similarity
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            306;
                                                                                                                                                                                                                                                                                                    CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 298 Std Error: 0.00
Seq primer: -40UP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D.,
Emmert-Buck, M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                           High quality sequence stop: 302.
Location/Qualifiers
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                                        Conservative
                                                                                                         39
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                                                                                                                     Average insert size 1.69 kb. Life Technologies 11549-011"
                                                                                                                                                /note="Organ: stomach; Vector: pCMV-SPORT6; Site_1: Sall;
Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT.
                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2542102"
                                                                                                                                                                                   /clone_lib="NCI_CGAP_Gas4"
/tissue_type="poorly differentiated adenocarcinoma with
signet ring_cell_features"
                                                                                                                                                                      /lab_host="DH10B"
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                                                     58.6%;
98.4%;
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                                                     Score 293.2;
Pred. No. 6e-
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Bonaldo, M.F.,
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Mammalia;
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Sus scrofa
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201 Kildee Hall, Ames,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               discovery
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                                                                                                                                                                                                                                                                                                                                                                   Tel: 5152944252
                                                                                                                                                                                                                                                            primer: M13 Forward
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                                                                                                                                                    /strain="crossbreed"
/db_xref="taxon:9823"
/clone="M1-P-AV1"
/clone_1ib="M1-P-AV1"
                                                                                                                                                                                                       /organism="Sus scrofa"
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159 GGGCTCGGGCTGAGTGTCGCCCACTGAGCAAAGATTCCCTCGTAAAACCCCAGAGCGACCC
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455 bp mRNA linear EST MI-P-AY1-nrc-h-10-0-UI.sl MI-P-AY1 Sus scrofa cDNA clone MI-P-AY1-nrc-h-10-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cktuggle@iastate.edu
Oligo-dT track not found, Not I site shown in beginning of seque
is likely internal to the message. cDNA Library Preparation: M.I
Soares Lab, University of Iowa EST sequencing: M.B. Soares Lab,
University of Iowa Clone distribution: clones will be available
through Research Genetics (www.resgen.com)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Molecular Genetics Laboratory, Department of
/lab_host-"DHIOB (Life Technologies)"
/lab_host-"DHIOB (Life Technologies)"
/lab_host-"DHIOB (Life Technologies) with a modified note-"Yector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: ECORI; The MI-P-AY1 library is normalized library derived from the MI-P-AY0 library, ultimately derived from placenta tissue. For a detailed description of the library from which this clone was derived, please visit our web site at http://pigest.genome.iastate.edu/. The procedure used to create this library has been previously described (Bonaldo, Lennon and Soares, Genome Research 6: 791-806, 1996)
TAG_SEQ-None found"
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Sus scrofa
               Seq prime:
POLYA=No.
                                         Email: cktuggle@lastate.edu
Oligo-dT track not found, Not I site shown in beginning of sequence
is likely internal to the message. cDNA Library Preparation: M.B.
Soares Lab, University of Iowa EST sequencing: M.B. Soares Lab,
University of Iowa Clone distribution: clones will be available
through Research Genetics (www.resgen.com)
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BI398642.1
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398 bp mRNA linear EST:
MI-P-AY1-npv-c-01-0-UI.sl MI-P-AY1 Sus scrofa cDNA clone
MI-P-AY1-npv-c-01-0-UI 3', mRNA sequence.
                                                                                                                                                                             Iowa State University
201 Kildee Hall, Ames,
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Bonaldo, M.F., Lennor
                                                Genome Res. 6 (9),
                                                                                                                                                                 Sus scrofa
                                                                                                                                                                                               BF709496.1
EST.
               Contact: Tuggle CK
                                                                  discovery
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Similarity 83.3%;
Molecular Genetics Laboratory, Department of Animal Science
                                                                                 Normalization and subtraction: two
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/lab.host="MING" (Life Technologies)"
/lab.host="MING" (Life Technologies)"
/lab.host="MING" (Life Technologies)"
/lab.host="MING" (Life Technologies)"
/lab.host="MING" (Pharmacia) with a modified
/note="Yector: Site_2: EcoRI; The MI-P-AY1
library is normalized library derived from the MI-P-AY0
library is normalized library derived from which this clone
detailed description of the library from which this clone
was derived, please visit our web site at
http://pigest.genome.iastate.edu/. The procedure used to
create this library has been previously described (Bonaldo
create this library has been previously described (Bonaldo
TAG_SEQ=None found"

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/strain="crossbreed"
/db_xref="taxon:9823"
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/clone_lib="MI-P-AY1"
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                                                                                               Lennon, G. and Soares, M.B.
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RESULT 14
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201 Kildee Hall, Ames, IA 50011-3150, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cktuggle@iastate.edu
BI398600 385 bp mRNA linear EST MI-P-AY1-npu-e-10-0-UI.sl MI-P-AY1 Sus scrofa cDNA clone MI-P-AY1-npu-e-10-0-UI 3', mRNA sequence.
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/lab_host="DHIOB (Life Technologies)"
/note="vector: pT73D-Pac (Pharmacia) with a modified
/note="vector: pt73D-Pac (Pharmacia) with a modified
/note="vector: pt3D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: EcoRI; The MI-P-AYO
library is derived from placenta. For a detailed
description of the library from which this clone was
derived, please visit our web site at
http://pigest.genome.lastate.edu/. The procedure used to
create this library has been previously described (Bonald
create this library has been previously described (Bonald
Jac Space) Anome found"
62 a 168 c 145 g 65 t
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Pred. No. 1.8e-32;
0; Mismatches 61
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Soares Lab, University of Iowa EST sequencing: M.B. Soares Lab University of Iowa Clone distribution: clones will be availal through Research Genetics (www.resgen.com)
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Fax: 5152942401
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201 Kildee Hall, Ames,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /strain="crossbreed"
/db_xref="taxon:9823"
/db_oxref="taxon:9823"
/clone="MI-P-AYI"
/clone=Iib="MI-P-AYI"
/lab_host="9H10B (Life Technologies)"
/lab_host="9H10B (Tife Technologies)"
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83.0%;
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Pred. No. 5.8e-32;
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Qy	ОУ	Query Best I Matche	BASE C			JOURN MEDLI COMMENT	REFER AUT TIT	RESULT 15 B139954/C LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISh	Оу	Db
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CCCTCGTAAAACCCAGAGCGACCCTCCCGTCAATTGTTGGGCTCGGGAGTGTCGCG 250 	GTGCTTTTGCTTTTTTTTTCCTTTGGGCTCGGGCTGAGTGTCGCCCACTGAGCAAAGATT 194 	/ Match 47.6%; Score 238.2; DB 10; Length 374; Local Similarity 83.1%; Pred. No. 9.3e-31; nes 319; Conservative 0; Mismatches 34; Indels 31; Gaps 3;	ACCRATA BECOM		ity mes, IA 50011-3150, USA state.edu found, Not I site shown in to the message. cDNA Libra sity of Iowa EST sequencing clone distribution: clones enetics (www.resgen.com) rward constitions	96)	Sutheria; Cetartiodactyla; Suina; Suidae; 1 to 374) F., Lennon,G. and Soares,M.B. ion and subtraction: two approaches to fac	BI399954 MI-P-AY1-nrh-f-11-0-UI.S1 MI-P-AY1 Sus scrofa cDNA clone MI-P-AY1-nrh-f-11-0-UI 3', mRNA sequence. BI39954 BI39954.1 GI:15179015 EST. pig. Sus scrofa Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	GAGCACGGCCACAGCCTGGGTGGCTCCGCAGCCGC 497 	

Search completed: October 10, 2002, 20:27:28 Job time: 701.733 secs

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                    N_Geneseq_032802:*

| SIDS1/gcgdata/hold-geneseq/geneseqn-emb1/Wa1980.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqn-emb1/Wa1981.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqn-emb1/Wa1982.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqn-emb1/Wa1983.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqn-emb1/Wa1983.DAT:*
| SIDS1/gcgdata/hold-geneseq/geneseqn-emb1/Wa1985.DAT:*
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Gapop 10.0 , Gapext 1.0
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AAX53491	AAH26500	AAK81373	AAX53491	AAD25519	AAD25519	AAQ94779	AAC10488	AAD11113	ID
Human adenosine Al	Rabbit low density	Human immune/haema	Human adenosine Al	Human herpesvirus	Human herpesvirus	Regulator of neuro	Human secreted pro	Human small cell l	Description

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AAT94103 AAA28423 AAA98954 AAT13821 AAS81252	AAZ55620 AAT11639 AAV80733 AAAS9897 AAAA59897 AAAA75635 AAA756003	AAA14651 AAQ25444 AAT05556 AAZ25275 AAZ38795	AAV24114 AAV24113 AAH26499 AAH26495 AAS72464	AAK68601 AAS73772 AAV21187 AAD17186 AAD17186	AAI84136 AAA31440 AAF27264 AAX77135	AAH81775 AAS20000 AAV62176 AAF30757
cDNA. cistin cistin derive kidne ng nov	BMP-7 ostec ostec DNA s immed otide o 002	Nucleotide sequenc PACE composite seq Human PACE coding Human PACE-like pr	LH-2 protein codin LH-2 protein codin Human low density Human low density Human now density DNA encoding novel	n immune/ encoding encoding olatopsis olatopsis ptomyces ptomyces	Human polynucleoti Plant microsatelli Chicken atonal hom Human nerve mutati	Human differential DNA encoding pyrid HSV-2 strain SB5 C Micromonospora meg

## ALIGNMENTS

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RESULT 1
AAD11113
                                                                                                            AAD11113 standard; DNA; 1322 BP
Human small cell lung cancer associated gene,
                                    24-SEP-2001 (first entry)
                                                                          AAD11113;
  ID4.
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Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; ID4; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; synovial sarcoma; helix-loop-helix; HLH; cytostatic; ds (LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CA (CORR ) CORNELL RES FOUND INC. 21-JAN-2000; 2000US-0489101. 19-JAN-2001; 2001WO-US02015 26-JUL-2001. WO200153349-A2

Stockert E, Scanlan MJ, Jager D, 01d EJ, Gure AO, Chen ۲,

CANCER RES

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RESULT 2
AAC10488
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   06-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by an isolated nucleic acid comprising an NA Group 3 or 4 molecule -
                                     AAC10488;
                                                                       AAC10488 standard; cDNA; 225 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1322 BP; 267 A; 376 C; 417 G; 262 T; 0 other;
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                                                                                                                                                                481 GGTGGCTCCGCAGCCGCGGC 500
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                                                                                                                                                                                                                                                                                                                                                CGCAGGGCGCGCGATGAAGGCGGTGAGCCCGGTGCGCCCTCGGGCCGCAAGGCGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGTGTCGCGGTGCCCCGAGCGCGGCCGGGCGCGGAGCGCAAAGGGAGCCGAGCCGGCCGCG
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                                                                                                                                                                                                                                                                         TCGGGCTGCGGCGGGGGGGGCTGCCCTGCCTGGCCGAGCACGGCCACACCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGCGCCCGATCGGGCTTAGTCGGAGCTCCGAAGGGAGTGACTAGGACACCCGGGTGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCGGCGCCCGATCGGGCTTAGTCGGAGCTCCGAAGGGAGTGACTAGGACACCCGGGTGGG 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAATTCCGGGCGCGGTTGTGAGTAGTACCGGGAGTGGGGTGATCCCGGGCTAGGGGAGC
                                                                                                                                                                                                                                                                                                          CGCAGGGCGCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGCCGCAAGGCGCCG
                                                                                                                                                                                                                                                                                                                                                                                CTACTTTTCCTTCCGGTGCTTTTTGCTTTTTTTCCTTTTGGGCTCGGGCTGAGTGTCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTGAGCAAAGATTCCCTCGTAAAACCCCAGAGCGACCCTCCCGTCAATTGTTGGGCTCGG
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(first entry)
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Best Local
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07-MAR-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                         AAQ94779 standard; DNA; 1309 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 225 BP; 36 A; 55 C; 80 G; 53 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       expression and secretion vectors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID 14563; 71pp + CD-ROM; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       diagnostic, forensic, gene therapy and chromosome mapping procedures
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New nucleic acid that is a 5' expressed sequence tag (5' EST) for obtaining cDNAs and genomic DNAs that correspond to 5'ESTs and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-500381/45.
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                                                                                                                                                                                                                                                                                 194 AAAGATTCCCTCGTAAAACCCAGAGCGACCCT 225
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                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTTCCGGTGCTTTTTGTTTTTTTTTTCCTTTTGGGCTCGGGCTGAGTGTCGCCCACTGAGC 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \alpha;\ 5' EST; expressed sequence tag; secreted protein; cDNA isolation; therapy; chromosome mapping; ss.
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98.1%;
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Pred. No. 1.4e-29;
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-SEP-1994;
17-DEC-1993;
Human herpesvirus 2; cytostatic; cancer; immunosuppressive; virucide;
antibacterial; fungicide; protozoacide; antirheumatic; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1309 BP; 305 A; 339 C; 381 G; 284 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This sequence corresponds to RNP-1 which has no significant homologyg to other characterized sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 30; 60pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1995-231568/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neuman T, Nornes HO,
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                                  Human herpesvirus 2 complete DNA genome.
                                                       26-MAR-2002 (first entry)
                                                                              AAD25519;
                                                                                                 AAD25519 standard; DNA; 154746 BP
                                                                                                                                                                                                                                                                                                                                                                                         145 TITTITTTCCTTTGGGCTCGGGCTGAGTGTCGCCCACTGAGCAAAGATTCCCTGGTAAA 204
                                                                                                                                                                                                                                                                                         118
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                                                                                                                                                                                                                                                                                                                                  61 ACAAAAACCTGAGCTACCCTTTCCAAAACCCCGAGCAGCTCTCGTCGATTTCTG---GAG 117
                                                                                                                                                                                                                                                                                                                                                                              GTGAGCCCGGTGCGCCCCTCGGGCCGCAAGGCGCCGTCGGGCTGCGGCGGCGGGGGAGCTG 444
                                                                                                                                                                                                                                                                                         CTCGGAGCCGCCGGGTGCTGCGAGCGCCGGACGCAGAGGAGGGGAGCAAAGCAAATTGCG 177
                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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93US-0169522
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                                                                                                                                                                                                                                                                                                                                                                                                                         23.4%; Score 116.8; DB 16; Length 61.8%; Pred. No. 1.4e-15; ative 0; Mismatches 132; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Orson FM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (BAYU ) BAYLOR COLLEGE MEDICINE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-APR-2001; 2001WO-US11372.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human herpesvirus 2.
                                                                                                                                                                                                              191 GATTCCCTCGTAAAACCCAGAGCGACCCTCCCGTCAATTGTTGGGCTCGGGAGTGTCGCG 250
                                                                                                                                                                                                                                                                                                    to the invention.
                                                                                                                                                                                                                                   al Similarity
155; Conserv
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                                                                                                                                                                                                                                    Conservative
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antiarthritic; rheumatoid arthritis; neuroprotective; multiple sclerosis; immune response; vasotropic; vaccine; gene therapy; autoimmune disease; vasculitis; ds.

Composition for oral delivery of vaccines, comprises expression vector containing antigenic genomic sequence, bound to aggregated protein-polycationic polymer conjugate or suspension

consisting of bacterium, fungus, protozoa and virus such as human immunodeficiency virus (HIV), herpes simplex virus (HSV), hepatitis C virus (HSV), influenza and respiratory syncytial virus (RSV), and optionally comprising a nucleotide sequence encoding a cytokine (or a cytokine expression vector), is useful for inducing an immune response (systemic and/or mucosal) in an organism. The cytokine expression vector contains a sequence for granulocyte macrophage-colony stimulating factor (GM-CSF) or interleakin-12 (II-12). The polynucleotide sequences encoding the antigen and the cytokine are under transcriptional control of same or different promoter polynucleotide sequences. The expression vector, as a DNA vaccine is useful for treating a condition in an organism. The present sequence is human herpesvirus 2 complete DNA genome related The invention relates to a composition comprising an expression vector bound to an aggregated protein-polycationic polymer conjugate or suspension. The expression vector contains a promoter polynucleotide sequence operatively linked to a polynucleotide sequence encoding an antigen which is a fragment of a gene or genome associated with an infectious disease, cancer and autoimmune disease such as rheumatoid arthritis, vasculitis, and multiple sclerosis, pathogenic genomes and arthritis, vasculitis, and multiple sclerosis, pathogenic genomes

Sequence 154746 BP; 23003 A; 54218 C; 54701 G; 22824 T; 0 other;

10.3%; Score 51.6; DB 24; Length 154746; 50.3%; Pred. No. 0.051; tive 0; Mismatches 149; Indels 4; 4; Gaps

1124 GGTGGCCTGGGAGACGGCCGCGCGCCTGGCCCGACGGGGGTCCTGGGCCGCGCGAGCGGGC 1183 

371 GCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGCCGCAAGGCGCCGTCGGGCTGCG 430

Qy

491 CAGCCGCG 498

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DD 126126 GGTGGCCTGGGAGACGGCCGCGCGCCCTGGCCCGACGGGGGTCCTGGGCGCGCGAGCGGGC 126067
                                                                                                                                                                                                             The invention relates to a composition comprising an expression vector Co bound to an aggregated protein-polycationic polymer conjugate or suspension. The expression vector contains a promoter polynucleotide CC suspension. The expression vector contains a promoter polynucleotide and CC antigen which is a fragment of a gene or genome associated with an CC infectious disease, cancer and autoimmune disease such as rhamman CC arthritis, vasculitis, and multiple sclerosis, pathogenic genomes consisting of bacterium, fungus, protozoa and virus such as human consisting of bacterium, fungus, protozoa and virus such as human consisting of bacterium, fungus, protozoa and virus such as human consisting of the curvia such as human consisting of bacterium, fungus, protozoa and virus such as human consisting of the curvia such as human consisting of the curvia such as human functionally comprising a nucleotide sequence encoding a cytokine (or a curvia such as protozoa and virus (RSV), and curvia such as functional control of such contains a sequence for granulocyte macrophage-colony stimulating factor contains a sequence or granulocyte macrophage-colony stimulating factor the antigen and the cytokine are under transcriptional control of same or different promoter polynucleotide sequences. The expression vector, as a CDMA vaccine is useful for treating a condition in an organism. The CC present sequence is human herpesvirus 2 complete DNA genome related con the invention.
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AAD25519/c
ID AAD25519 standard; DNA; 154746 BP.
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                                                                                            Matches 155;
                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human herpesvirus 2; cytostatic; cancer; immunosuppressive; virucide; antibacterial; fungicide; protozoacide; antirneumatic; antiinflammatory; antiarthritic; rheumatoid arthritis; neuroprotective; multiple solerosis; immune response; vasotropic; vaccine; gene therapy; autoimmune disease;
                                                                                                                                                                          Sequence 154746 BP; 23003 A; 54218 C; 54701 G; 22824 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 90-132; 145pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Composition for oral delivery of vaccines, comprises expression vector containing antigenic genomic sequence, bound to aggregated protein polycationic polymer conjugate or suspension
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1420 GAGCTCCG 1427
                                           191 GATTCCCTCGTAAAACCCAGAGCGACCCTCCCGTCÁATTGTTGGGCTCGGGAGTGTCGCG 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BAYU ) BAYLOR COLLEGE MEDICINE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-APR-2000; 2000US-195680P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human herpesvirus 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vasculitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human herpesvirus 2 complete DNA genome.
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                                                                                                                 Local
                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kinsey BM,
                                                                                            Conservative
                                                                                                            10.3%;
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                                                                                            0;
                                                                                                              Score 51.6; DB 24; Length 154746; Pred. No. 0.051;
                                                                                            Mismatches
                                                                                            149; Indels
                                                                                      4;
                                                                                   Gaps
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RESULT 6
AAX53491
ID AAX5
      Db 125830 GAGCTCCG 125823
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, interpretation borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; oystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; colon cancer; breast cancer; lung cancer; pelakemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; panoreatic cancer; hepaticesillar carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                  Disclosure; Page 37; 120pp; English.
                                                                                                                                                                                                         Vasoconstriction
                                                                                                                                                                                                                       New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                              WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                       (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                         09-JUN-1998;
17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W09913886-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prostate cancer; ss.
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97US-0059160
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RESULT 7
AAK8133 XX ACC AAK813 XX O7-NOV XX UNMAN PR 29-O1-NOV XX UNMAN PR 29-O1-NOV XX UNMAN PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR PR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR 11-MAR
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31-JAN-2000

04-FEB-2000

24-FEB-2000

02-WAR-2000

10-WAR-2000

11-MAR-2000

11-MAR-2000

11-MAY-2000

07-JUN-2000

07-JUN-2000

07-JUN-2000

07-JUN-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; immune; haematopoietic; immune/haematopoietic antigen; cancer;
cytostatic; gene therapy; vaccine; metastasis; ds.
                                                                                                                                                                                                                                                                            17-JAN-2001; 2001WO-US01354.
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                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human immune/haematopoietic antigen genomic sequence SEQ ID NO:36185
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        447 GCTGCGCTGCCTGGCCGAGCACGGCC 472
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          267 GGGCGCGGAGGCAAAGGGAGCCGGAGCCGGCCGGAGCCCGGAGCTTGCCTC 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90;
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Similarity 33.8%;
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                                      2000US-0179065
2000US-0180628
2000US-0184664
2000US-0188350
2000US-0189874
2000US-0199874
2000US-0198123
2000US-0198123
2000US-0205515
2000US-0205467
2000US-0214886
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       07-JUL-2000;
11-JUL-2000;
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26-JUL-2000;
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14-AUG-2000;
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22-AUG-2000;
30-AUG-2000;
31-SEP-2000;
01-SEP-2000;
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02-OCT-2000
03-OCT-2000
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25-SEP-2000;
26-SEP-2000;
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2000US-0217487.
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2000US-0224519.
2000US-0225213.
2000US-0225214.
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2000US-0235484.
2000US-0235834.
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2000US-0227182.
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2000US-0225758.
2000US-0225759.
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AAK54951 to AAK64702 encode the human immune/haematopoletic antigen (I) amino acid sequences given in AAK82170 to AAW9921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I)
                                                                                                                                                                                                                                                                      08-DEC
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20-OCT-2000;
01-NOV-2000;
                                                                                                                                Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis -
                                                                                                      Disclosure; SEQ ID NO 36185; 3071pp + Sequence Listing; English.
                                                                                                                                                                   WPI; 2001-483426/52.
                                                                                                                                                                                        Rosen CA,
                                                                                                                                                                                                           (HUMA-) HUMAN GENOME SCI INC
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17-NOV-2000
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2000US-0244617.
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2000US-0249217.
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2000US-0249213.
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Best Local Similarity 49.6%;
Matches 126; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 to AAK87504 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK54912 to AAK54950 and AAM882169
                                                                   WPI; 2001-565505/63.
P-PSDB; AAB82807.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oryctolagus cuniculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAH26500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 15723 BP; 3189 A; 4555 C; 4419 G; 3560 T; 0 other;
                                                                                                                                                                                                                                                                                                            02-MAR-2000; 2000US-0517849
14-JUL-2000; 2000US-0616289
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           atherosclerosis; antiarteriosclerotic; gene therapy; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rabbit low density lipoprotein binding protein 2 (LBP-2) cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAH26500 standard; cDNA; 2561 BP.
                                                                                                                                                                                                                                             (BOST-) BOSTON HEART FOUND INC
                                                                                                                                                                                                                                                                                                                                                                                                               28-FEB-2001; 2001WO-US06356
                                                                                                                                                                          Lees AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Low density lipoprotein binding protein 2; LBP-2; LDL; rabbit;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     473 ACAGCCTGGGTGGC 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115 CCGCCCCCACGGCTTCCTGCAGCAGCGCCCCGAGCCGGCTCAGCATGATGGCGCCCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    413 AGGCGCCGTCGGGCTGCGGCGGCGGGGAGCTGGCGCTGCCTGGCCGAGCACGGCC 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           175 CCGCCCAGCCCGGCCTAGGCCCGCGACTCCCGGCGGGCCCGGCCCGGCCCTGCCGGCCTCA 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           353 GCGTAGAGCGCAGGGCGCGCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGCCGCA 412
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  55 CCCGGCTCCCGGGC 42
                                                                                                                                                                          Lees RS, Law SW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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                                                                                                                                                                          Arjona AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 15723;
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New isolated low density lipoprotein binding polypeptide for treating,

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RESULT 9
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AAX534
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PD XXX
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lipoprotein (LDL) and methyl LDL. The invention provides claimed polypucleotides encoding novel polypeptides which are capable of binding to native and methylated LDL, the isolated polypeptides, termed LBPs, and biologically active fragments and analogues of them, as well as expression vectors, cells and methods of producing the LBPs. Also claimed are methods of determining if an animal is at risk for atherosclerosis, methods for evaluating an agent for use in treating atherosclerosis, and methods for treating an apent having an abnormality in structure or metabolism of LBP. Pharmaceutical compositions comprising an LBP polypeptide or nucleic acid, and vaccine compositions, are also claimed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       diagnosing and/or identifying therapeutic agents for atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence is that of cDNA encoding novel rabbit low density lipoprotein binding protein 1 (LBP-2, see AAB82807). The cDNA was isolated following screening of a rabbit cDNA library for clones encoding LBPs that bound to both native low density for clones encoding LBPs that bound to both native low density lipoprotein (LDL) and methyl LDL. The invention provides claimed lipoprotein (LDL) and methyl LDL. The invention provides claimed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2561 BP;
                                                                                                                                      impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                        Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                            05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                  AAX53491 standard; DNA; 114955
                                                                                                                                                                                                                                                                      Antisense oligonucleotide; multiple target; antisense treatment
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                                    WO9913886-A1
                                                                                                          prostate cancer;
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                                                                                                                         hepatocellular carcinoma; kidney cancer; melanoma;
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43; Conservative
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54.0%;
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17-SEP-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    directed against at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 37; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vasoconstriction
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          206 CCCAGAGCGACCCTCCCGTCAATTGTTGGGCTCGGGAGTGTCGCGGTGCCCCGAGCGCGC 265
                                                                                                                                                                                                                           444
                                                                                                                                                                                                                                                                                                                                                                            326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  specification describes antisense oligonucleotides (AAX52869-X55271) ected against at least 2 mRNAs selected from target genes, coding and
                                                                                                                                                                                                                                                             GCGGCGCGGGGNNHNNNSGGCGGGCGGCGGCGGCGCGCGGGGCC 110496
                                                                                                                                                                                                                                                                                                GCGCGNNHNNNSGGCGGCGCGCGCGNNHNNNSGGCGGGCGCGCGGGNNHNNNSGGCGG
                                                                                                                                                                                                                                                                                                                                                                        CGGGCGGCNNHNNNSGGCGGGCGGCGNNHNNNSGGCGGGCGCNNHNNNSGGCGGGCG 110616
                                                                                                                                                                                                                                                                                                                                                                                                                                                 NNHNNNSGGCGGCGCGCGCGGGCCCNNHNNNSGCGCGCGCGCCCNNHNNNSGGCGC
                                                                                                                                                                                                                   GGCGCTGCGTGCCTGGCCGAGCACGGCCACAGCCTGGGTGGCTCCGCAGCCGCGC 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   111;
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97US-0059160
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                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.8%;
37.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 48.8; DB 20; Pred. No. 0.19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 114955;
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(first entry)

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RESULT 11
AAS20000
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention describes a nucleic acid (I) with differential expression between tumour and normal cells and which has cytostatic activity. (I) work as modulators of Ras activity by inducing expression of tumour suppressor genes. (I), and polypeptides encoded by them, are useful as targets for diagnosis or therapy and in screening to determine the effects of an active compound (potential pharmaceutical) on a cell line, particularly for diagnosis and treatment of tumors, especially by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 438-439; 579pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nucleic acids differentially expressed between tumor and normal cells, useful for diagnosis or therapy of tumors and for screening active
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-JAN-2000; 2000DE-1004102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200157058-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Differential transcription; human; rat; tumour cell; cytostatic; Ras modulator; Class II tumour suppressor gene; gene therapy; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3787 BP; 898 A; 1210 C; 1073 G; 606 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  agents
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-JAN-2001; 2001WO-EP01003.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human differential transcription-associated cDNA SEQ ID 284.
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                                                             95
                                                                                                                                                                                                        CCCTCGCTCGCCCAGCGGTTCGCTCGCGTAGAGCGCAGGGC-GCGCGCGCGATGAAGGCG
                                                                                         GGCGCTGCGCTG 455
                                                                                                                        CCGCGCCGGGAGCCGCCCGCCGGGGCCGCGGGGGGGCGCCTGAGAGTGCGCGGGGGGGCCC 96
                                                                                                                                                       GTGAGCCCGGTG-CGCCCCTCGGGCCGCAAGGCGCCGTCGGGCTGCGGCGGCGGGGAGCT 443
                                                                                                                                                                                      GGCCCGCGCGCGCGCGCGGCCGGGCGTCCACAATGCCGGCGGGCTGCTGGGG
                                                                                                                                                                                                                                               CGGGCGCGAGGCAAAGGGAGCGGAGCCGGCCGGACGGGGCCCGGAGCTTGCCTT 325
                                                                                                                                                                                                                                                                                                           GGCCGCGCGCGG 84
                                                                                                                                                                                                                                                                                                                                                                      144;
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Similarity 57.1%;
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Pred. No. 0.26;
0; Mismatches
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                                                                                                           exon
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                                                                                         /standard_name= "
33793..33880
/*tag= q
                                                               /number= 6
                                                                                                                                                                                              /number= 5
30924..33792
             /standard_name= "Single nucleotide polymorphism" replace(33831,G)
                                             replace(33801,A)
/*tag= r
                                                                                                                                                                                                                                                                                         /standard_name= "Single nucleotide polymorphism"
replace(28683,A)
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specifically claimed in claim 27"
4093..4179
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replace(3930,G)
                                                                                                                                                    replace(33776,C)
                                                                                                                                                                                                                                                                                                                                       replace(28631,G)
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/*tag= k
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10877..30923
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/*tag= g
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/*tag= f
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                               /standard_name= "Single nucleotide polymorphism"
replace(40875,C)
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40496..40562
/*tag= aj_
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replace(33922,G)
/standard_name= "Single nucleotide polymorphism"
                                                                      replace(40841,A)
/*tag= ao
                                                                                                           /number= 11
                                                                                                                                                                                                                                                 /standard_name= "Single nucleotide polymorphism"
replace(40521,T)
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/*tag= ai
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replace(37545,A)
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37316.37427
**tag= ac
/number= 8
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replace(33840,A)
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/*tag= an
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8518..40495
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Best Local Similarity
Matches 118; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention describes an isolated human pyridoxal (pyridoxine, vitamin B6) kinase, (PDXK) polynucleotide. The polynucleotide is useful in studying the expression and function of PDXK, and in expressing PDXK protein for use in screening for candidate drugs to treat PDXK related diseases and for therapeutic purposes. A transgenic animal is useful for studying expression of the PDXK isogenes in vivo, for in vivo screening and testing of drugs targeted against PDXK protein, and for testing the efficacy of therapeutic agents and compounds for autoimmune polyglandular disease type 1. The polypeptide is useful for studying the effect of the variation on the biological activity of PDXK and the binding affinity of candidate drugs targeting PDXK for the treatment of autoimmune polyglandular disease type 1. Genotyping and haplotyping is useful for improving the efficacy and reliability of several steps in the discovery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and development of drugs for treating diseases associated with PDXK activity, e.g., autoimmune polygiandular disease type 1, to validate PDXK as a candidate agent for treating a specific condition or disease predicted to be associated with PDXK activity, and in the design of clinical trials of candidate drugs. This sequence (located on chromosome clinical trials of candidate drugs. This sequence (located on chromosome 21922.3) encodes human pyridoxal (pyridoxine, vitamin B6) kinase (PDXK) and forms the reference sequence on which the isoforms AAU11952 and
13-JAN-1999
                                                                             AAV62176 standard; DNA; 117213
                                       AAV62176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 44861 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated human pyridoxal (pyridoxine, vitamin B6) kinase polyuseful for therapeutic purposes, for studying the expression function of the polyNt, and for expressing pyridoxal protein
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P-PSDB; AAU11951.
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                                                                                                                                                                                                                    416
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                                                                                                                                                                                                                                                                                                                                                           GGGCTCGCGGGGGGCTCGCGGGGGGGCTCGCGGGGGGGCTCGAGGC
                                                                                                                                                                                                                  CGCCGTCGGGCTGCGGCGGGGGAGCTGCCGTGCCTGGCCGAGCACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                       CTCGGGAGTGTCGCGGTGCCCCGAGCGCGCCGGGCGCGGAGGCAAAGGGAGCGGAGCCGG 295
                                                                                                                                                                                                                                                           GGGGGCTGGCGGGGGCTGGCGGGGGGGCTCGCGGGGGGCTCGCGGGGGCTCGCGGGG
                                                                                                                                                                                                                                                                                                 TAGAGCGCAGGGCGCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGCCGCAAGG 415
                                                                                                                                                                                                                                                                                                                                          Duda
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(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Koshy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9041 A; 12297 C; 13398 G; 10125 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 47.2; DB 24;
Pred. No. 0.4;
0; Mismatches 118;
                                                                             ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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# ct	# ct.	/product= "ORF#7 protein" /note= "encoded protein shown in AAW72175" complement (960411855) /*tag= n	/product= "OMF#6a protein" /transl_except= (pos: 74007402, aa: Ala-Ala) /transl_except= (pos: 74817486, aa: Ile) /note= "encoded protein shown in AAW72244" 84579347 /*tag= m	ct= "ORF# "encoded 8482	"ORF#6c ncoded pr	/product= "ORF#6d protein" /note= "encoded protein shown in AAW72247" 62968482 /*tag= j	/"cay" // reay" // reay" // product = "ORF#6e protein" // note = "encoded protein shown in AAW72248" // 1848	64 84	84 ac	84 C	₹ 1	E 14	coded p	74 b = "ORF#2 protein"	F#1 p	_	in SB5 Contig ID 15 DNA sequence. in SB5; immunological response induction; therapy; identification; viral protein inhibitor; ss.
Q	G	a	FF FF FF FF FF FF FF FF FF FF FF FF FF	) (	ა ი	FT CDS FT FT	n n n n n n	FT CDS	FIT CDS	FT CDS	FT CDS	FT CDS		FT CDS	FIT CDS	FT CDS	FT CDS
DS	DS	DS	Ds Ds	DS:	S S	S	DS	8	S	S	й	ŭ		ŭ	S	SC	й
ncoded pr 935 h	<pre>/product= "ORF#23 protein" /note= "encoded protein shown complement (3805839188) /*tag= ag /product= "ORF#24 protein"</pre>	"ORF#22b protei coded protein s (3520537721)		3206/. RF#21   ded pro	(27630. 'ORF#20a coded pr	S 12 5	nent (2629527251) z zt= "ORF#19 protein "encoded protein s	2468425955  /*tag= y /product= "ORF#18 protein" /product= "neroded protein shown	624654 7 protei		2015521453 /*tag= v /product= "ORF#15 protein" /note= "encoded protein shown	complement (1941520074) /*tag= u /product= "ORF#14 protein" /note= "encoded protein shown	"ORF#13	₩ .C.	# TC	· H	<pre>/*tag= p /product= "ORF#9a protein" /prote= "encoded protein shown 1439915802 /*tag= q /*rdgct= "ORF#10 protein"</pre>

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Best Local Sim
Matches 116;
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                                                              109292 CGGGCGGGGGCGCGGCGGGGGGGGGGGGGCGC 109259
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                                                                                                                                                                                                                                                  GCTCGCGTAGAGCGCAGGGCGCGCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGC
                                                                                                                                                                                       GAAGC
                                                                                                                                                                                                                   CGCAAGGCGCCGTCGGGCTGCGGCGGGGAGC
                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                         /product= "ORF#36 protein"
/note= "encoded protein shown
61241..62071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product= "ORF#34 protein"
/note= "encoded protein shown
complement (58970..60760)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product= "ORF#33 protein"
/note= "encoded protein shown
complement (58060..58977)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product= "ORF#32 protein"
/note= "encoded protein shown
54393 .58115
/*tag= ap
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complement (44853..47297)
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/note= "encoded protein shown
complement (51701..53575)
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/note= "encoded protein shown
complement (50035..51666)
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/*tag= al
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/note= "encoded protein shown
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/note= "encoded protein shown
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/note= "encoded protein shown
40216..41973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transl_except= (pos: 44063..44064, aa: Lys)/product= "ORF#27 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "encoded protein shown
50759..61151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'product= "ORF#35 protein"
                                                                                                                                                                                                                                                                                                                              9.48;
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                                                                                                                                                                                                                                                                                                             Score 46.8; DI Pred. No. 0.5; O; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Megalomicin; meg gene; polyketide synthase; motilide; antiparasitic; ds.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Micromonospora megalomicea megalomicin biosynthetic gene cluster.
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                                                                                                                                                                                                                                /*tag= h
/gene= "megDV"
/gene= "megDV"
/product= "TDP-4-keto-6-deoxyhexose 4-ketoreductase"
/note= "eryVIV, dnmV homolgoue; encodes AAB82208"
complement (8228..9220)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= b
/gene= "megDVI"
/product= "TDP-4-keto-6-deoxyhexose 3,4-isomerase"
/note= "encodes AAB82202"
                                                                                                                                                                                                                                                                                                                                                                                          /gene= "megDIII"
/product= "daunosaminyl-N,N-dimethyltransferase"
/note= "eryCVI homologue; encodes AAB82206"
6592..7197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product="TDP-4-keto-6-deoxyglucose-
2,3-dehydratase"
/note= "encodes AAB82201"
928..2061
                                                                        /product= "TDP-mycarose glycosyltransferase"
/note= "encodes AAB82210"
complement (10483..11424)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "eryCI,
5822..6595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= e
/gene= "megDII"
/*roduct= "TDP-3-keto-6-deoxyhexose"
/*roduct= "TDP-3-keto-6-deoxyhexose"
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/*roduct= "TDP-3-keto-6-deoxyhexose"
/*roduct= "TDP-3-k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene= "megy"
/product= "mycarose O-acyltransferase"
/note= "encodes AAB82204"
4651..5775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers complement (1..144)
                                                                                                                                                      complement (9226..10479)
                                                                                                                                                                  /gene= "megBII-1(megDVII)"
/product= "TDP-4-keto-6-deoxyhexose
/note= "encodes AAB82209"
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              /gene= "megBIV"
/product= "TDP-4-keto-6-deoxyhexose 4-ketoreductase"
/note= "encodes AAB82211"
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/gene= "megDIV"
/product= "TDP-4-keto-6-deoxyhexose 3,5-epimerase"
/note= "eryBVIII, dnmU homologue, encodes AAB82207"
7220..8206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene- "megDI"
/product= "TDP-megosamine
/note= "eryCIII homologue;
3462..4634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene= "megBVI(megT)"T"
                                                                                                                       /gene= "megBV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DnrJ homologue, encodes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               glycosyltransferase"
; encodes AAB802203"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antibiotic;
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misc_feature
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/function= "KS4"
28897..29931
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/function= "KS3"
24544..25581
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/function= "KR1"
17947..18207
                                                                                                                                                                  /note= "polyketide synthase, encodes AABB2213"
22957..24237
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12505..13470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene= "megA"
/*tag= l
                              /*tag=
                                       27393..28590
                                              gene= "megAII"
/function= "ACP3"
                                                                                                                                                           /*tag=
                                                                                                                                                                                          /product=
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                                                                                                                                                                                                                        /gene= "megA"
/function= "ACP2"
                                                                                                                                                                                                                                                22318..22575
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/function= "ACP1"
18268..19548
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/function= "AT1"
                                                                              'gene= "megAII"
'function= "KR3
                                                                                                                                                                                                                                                        gene= "megA"
function= "KR2"
                                                                                                                                                                                                                                                                                                                      gene= "megA"
function= "KS2"
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                                                                                                                     gene=
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                                                                                                                                                                                                                                                                                               'gene= "megA"
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function= "ACP-L"
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                                                                                                             function-
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                                                                                                             = "megAII"
:tion= "AT3"
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                                                                      ..27258
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          "megA"
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synthase 2"
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Best Local Similarity
Matches 105; Conserv
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                                                                                              238 CGGGAGTGTCGCCGCGAGCGCGGCGGGCGGAGGCAAAGGGAGCCGGAGCCGGCC
                                                                      298
        418 CCGTCGGGCTGCGGCGGGGGAG 441
                                                              GCGGACGGGGCCCGGAGCTTGCCTGCCTCGCTCGCCCCAGCGGGTTCGCTGCGTA 357
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                                                                                      CCGCCGAGCCCCGGCGCCGAACGCGGCGGTGGAGGAGGAGGAAGACCACGAACGCGTCG 17541
                                                      AGGTCGGCGTCCCGGGTCAGCTCGTGCAGGTTGCGGGCACCGAGCACCTTCGCCCGGTTG
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                                                                                                                     Conservative
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24544..25581
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33052..33312
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29953..30477
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26998..27258
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/function= "AT5"
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                                                                                                                  Score 45.6; DB: Pred. No. 0.87; 0; Mismatches
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                                                                                                                     Indels
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17420 ACGTGGAACACCGCCGACAGCGGG 17397

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                                                                                                                                                                                        Matches
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                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to human polynucleotides (AAI79941-AAI93841) and the encoded proteins (AA000010-AA013910) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating
                                                                                                                                                                                                                                                                                                                                                  activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorders; arthritis; inflammation; ss.
                                                                                                                                                                                                                                                                                    Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 4196; 1399pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated nucleic acids and polypeptides, useful for preventing diagnosing and treating e.g. leukaemia, inflammation and immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-514838/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2000; 2000US-0515126
18-MAY-2000; 2000US-0577409
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human polynucleotide SEQ ID NO 4196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-NOV-2001 (first entry)
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                                                                                                                                                                                                                                                        Sequence 375 BP; 54 A; 138 C; 113 G; 41 T; 29 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P-PSDB; AAO04205.
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                     412
                                                                                                                                                                                                                                                                                                                                       inflammation
                                                     214
                                                                                                                        154
                                                                                                                                                                                                        Local Similarity
AAGGCGCCGTCGGGCTGCGGCGGGGGGGGGGCTGGCGTGGCCTGGCCTGGCCAGCACGCC 471
                                                   CGCGTAGAGCGCAGGGCGCGCGATGAAGGCGGTGAGCCCCGGTGCGCCCCTCGGGCCGC 411
                                                                                                                     CCGGCCGGACGGGGCCCGGAGCTTGCCTGCCTCCCTCGCCCCCAGCGGGTTCGCT 351
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                                                                                                                                                                                        Conservative
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0.84;
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RESULT 15
AAA31440
ID AAA31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and associated flanking species. The sequences comprise a central core repeat sequence, especially selected from the sequences AAA32094-A32096 with left and right flanking sequences. The polymucleotide sequences can be used in the detection of DNA polymorphisms, in genome mapping, in physical mapping, in positional cloning of genes, in variety identification and in evaluation of genetic variability within and between plant tissues, populations, cultivars, species and species groups. They may also be used to design hybridization probes for oligonucleotide fingerprinting and library screening and to design primers for microsatellite-primed PCR. Microsatellite markers are useful to locate specific economically useful genes in plant genomes.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 421 BP; 93 A; 142 C; 129 G; 57 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequences AAA31040-A32093 represent novel plant microsatellite sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 195; 392pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New plant microsatellite markers and associated flanking species for the detection of polymorphic genetic markers -       
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GENE-) GENESIS RES & DEV CORP LTD & FLETCHER. (FLET-) FLETCHER CHALLENGE FORESTS LTD.
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                                                              416 CGCCGTCGGGCTGCGGCGGCGGGAGCTGCGCTGCCCTGGCCTGGCCACACGGCCACA 475
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                                                                                                                                                                                                                                                                                228 CCGTCGCCGCGGTCCTGCCTCTTCCTGATCTCGGCCCTCGTCCTGGCGAGCCTCCTCGCC 287
                                                                                                                                                                                                                                                                                                                                               Local Similarity
CGGCGGCGGATCGCGCTGCGAGGGGTCGATAGCCCGGAGTGCCTGGCCGGCGGCGGCGACG
                                                                                                                                    TAGAGCGCAGGGCGCGATGAAGGCGGTGAGCCCGGTGCGCCCCTCGGGCCGCAAGG 415
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52.1%;
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;CAG 498	GGCCTGCACCACGCGCA 452 	GGGACTTCGGCGCCGGG 398	TACTCTGGGCCGCCCTT 338	TCCGCTGCGGCTGCCGC 278         GCGGCTGC 1001	GAGCTGTCCCCGGGCCA 218                 GAGCTGGCTTCGGCCGG 959	Length 3138; Indels 24; Gaps	Sequence 4, Appli Sequence 6, Appli Sequence 1, Appli Patent No. 5215881 Sequence 1, Appli

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US-09-103-840A-2/c
: Sequence 2, Application US/09103840A
: Patent No. 6294328
                                                                                                                                                                                    Sequence 7, Application US/08804227C Patent No. 5876991
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Best Local :
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                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                     3940320
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CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: WHITE, OWEN R.
APPLICANT: FRASER, Claire M.
APPLICANT: VENTER, JOHN C.
TITLE OF INVENTION: DNA SEQUENCES
TITLE OF INVENTION: TUBERCULOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: FLEISCHMAN, Robert D. APPLICANT: WHITE, Owen R.
CORRESPONDENCE ADDRESS:
ADDRESSEE: THOMAS G. PLANT 1501
STREET: LILLY CORPORATE CENTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: CDC 1551
OTHER INFORMATION: "n" bases at various positions throughout the sequence
OTHER INFORMATION: represent a, t, c or g
                                                      APPLICANT: Kubstoss, Stuart A.
APPLICANT: Rosteck, Paul R., Jr.
APPLICANT: Sutton, Kimberly L.
TITLE OF INVENTION: POLYKETIDE SYNTHASE GENES
NUMBER OF SEQUENCES: 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               283 GCCGCAGCGCTCGGGCCCACGCCGCGCACGTTGGCTCCTACTCTGGGCCGCCCTTCAAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          223 TCGGCGTTCACGTCGCAGGGCCCCGGCGCTACCCCGGCTCCGCTGCGGCTGCGCTGCG 282
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Local Similarity 49.2%;
es 177; Conservativo
                                                                                                                                                                                                                                                                                                                          TCCACCCGGGACTTCCTGTTCCGCAGCGCGCGCGCGTTCCGGGGACTTCGGCGCCGGGCGGC 402
                                                                                                                                                                                                                                                                                                                                                              GGTGGGGTTATCGGCGCCCGGC---CAGCACCCCCATCCCGCCTTGTCCGCCGGC 3940321
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ATTORNEY/AGENT INFORMATION:
NAME: Plant, Thomas, G.
REGISTRATION NUMBER: 35,784
REFERENCE/DOCKET NUMBER: X-82
TELECOMMUNICATION INFORMATION:
TELEPHONE: 317-276-2459
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
ENGRE CHARACTERISTICS:
                                   24041 CGGCCCAGGGCGTACGCGGCGCCGCCAGCGCGCACCTCGACGCGCTGGCCGAACGCGCCC 24100
                                                                                                                                                                                                                                                                               23861 TCGCCGTGCACGCCCCCGCCCTGGTGCCCCTGGCGCCCTGCGGGAGACGGCACCCGGCG
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431 CGGGCGGCCTGCACCACGCGCACTCGGACGCGCAGGGCCAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                          311 ACGTTGGCTCCTACTCTGGGCCGCCCTTCAACTCCACCCGGGACTTCCTGTTCCGCAGCG
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                                                                                                                    CGGCCGCGGCCTCGACGCGCTGGTGCTTCTCCTCGGTCTCCGGAGTGTGGGGCGGCG
                                                                                                                                                                                                    ACATCGCCGCCCCCCCCCCAAGACCACGGCCGCCGCCACCTGGTCGACCTGGCGC
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20110..31284
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350..14002
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Pred. No. 0.
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0.0071;
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                                                                                                                           Matches 185;
                                                                                                                                         Query Match
Best Local 9
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                                                             23741 CCGACGCCCCGCACAGGCCGCCGCCGCCGACTGACCGGCCTCCCCTCGTCCCCTCG 23800
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SEQUENCE CHARACTERISTICS:
LENGTH: 44377 base pai
 23801 GCTGCGACGTCACCGACCGCGCGCACTGGCCGCGCTGCTCGACGAGCACGCGCCCACCG 23860
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APPLICANT: Kubstoss, Stuart A.
APPLICANT: Rao, Nagaraja Rt
APPLICANT: Richardson, Mark A.
APPLICANT: Rosteck, Paul R., Jr.
TITLE OF INVENTION: PLATENOLIDE SYNTHASE GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 317-276-3885
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NAME: CANTRELL, PAUL R.
REGISTRATION NUMBER: 99
REFERENCE/DOCKET NUMBER: P9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: Macintosh 7.0 SOFTWARE: Microsoft Word 5.1 CURRENT APPLICATION DATA:
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OPERATING SYSTEM:
                                                                                            71 CCGCCGCGGCGGCGGCGGCGGCTGCCGCGAGATGCAGGACCGTGAACTGAGCCTGGCGG 130
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                             CGGCGCAGAACGGCTTCGTTGATTCCGCCGCCGCGCACATGGGAGCCTTCAAGCTCAACC 190
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LILLY CORPORATE CENTER
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31329..36071
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36155..41830
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20110..31284
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                                                                                                                        Score 55.4; DB 2; Length 44377;
Pred. No. 0.0071;
0; Mismatches 216; Indels 0;
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                                                                                                                                        Matches
                                                                                                                                                                       Query Match
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1910 base pair
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: PC'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    431 CGGGCGGCCTGCACCACGCGCACTCGGACGCGCAGGGCCAC 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 191 CGGGCGCACGAGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCGCAGGGCCCCGGCG
                 178 TTCAAGCTCAACCCGGGCGCGCACGAGCTGTCCCCCGGGCCAGAGCTCGCGTTCACGTCG 237
                                                                                                     118 CTGAGCCTGGCGGCGCGGAGAACGGCTTCGTTGATTCCGCCGCCGCGCACATGGGAGCC 177
                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                              OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: Amgen Center
STREET: 1840 Dehavilland Drive
CITY: Thousand Oaks
STATE: California
                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: ci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh OS 6.0.4
SOFTWARE: Microsoft Word Version 4.0b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                        ocal Similarity
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                                                                                                                                                                                                                                                                                                                                                                                          NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                              1910 base pairs
                                                                                                                                                                                                                          DNA sequence encoding
Streptomyces lividans Protease X
SRMATION: bp 12 to 1910 comprises
DRMATION: S. lividans DNA sequence, including Protease X.
DRMATION: bp 1 to 11 represents cloning vector DNA sequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                         circular
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                                                                                                                                                                                                                                                                                                                                         Genomic DNA
                                                                                                                                                                                                                                                                                                                                                                           double stranded
                                                                                                                                                      10.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isolation and Characterization of a Novel Protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from Streptomyces Lividans
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   1:
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                                                                                                                                      Score 51.4; DB Pred. No. 0.044; 0; Mismatches 2
                                                                                                                                                                         DB 5;
                                                                                                                                        201;
                                                                                                                                                                         Length 1910;
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                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                           Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Oleski, Nancy
REFERENCE/DOCKET NUMBER:
INFORMATION FOR SEQ ID NO: 1
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1312 AACCGCGCGTTCTTCGAGGCGGTCGTCAAGTCCGTCGCCGAGAAGCGCGCCGCCCAACCCG 1371
                                                                       1252 GTCAGAGCCGCCCAGCTCGGCTACCAGCCCTCGGCCGGCTCGGGCGAGGACGCGGCCGCC 1311
                                                                                                                                               1192 CTGACGGCCGTGCTCGGCACCGGCCCGCCGCGGCGCGCGGCGCCCCAGGAGCCG 1251
                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
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LENGTH: 2261 base pair
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                           178 TTCAAGCTCAACCCGGGCGCACCAGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCG 237
                                                                                                                                                                                 118 CTGAGCCTGGCGGCGCGCAGAACGGCTTCGTTGATTCCGCCGCCGCGCACATGGGAGCC 177
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                                                                                                                                                                                                                       Local Similarity hes 172; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
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                                 CAGGGCCCCGGCCTACCCCGGCTCCGCTGCCGCCTGCCGCCGCCGCCAGCGCTCGGG 297
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                                                                                                                                                                                                                                                                                                                                                                     H: 2261 base pairs
nucleic acid
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                                                                                                                                                                                                                                                                                                                 DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                     10.3%;
46.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 A-199A
                                                                                                                                                                                                                                       Score 51.4; DB 1; Length 2261; Pred. No. 0.043;
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GENERAL INFORMATION:
                                                                                                                                                INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Komari, Tosihiko
TITLE OF INVENTION: Stamen's
NUMBER OF SEQUENCES: 38
                  MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 2370 base pair
                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                          FILING DATE: 08-FEB-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                FILING DATE: 27-SEP-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 800 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA: APPLICATION NUMBER: US
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                        TOPOLOGY:
                                                                      STRANDEDNESS:
                                                                                          TYPE: nucleic acid
                                                                                                                                                                                                                          NAME: Kowalchyk, Katherine M. REGISTRATION NUMBER: 36,848 REFERENCE/DOCKET NUMBER: 8076
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
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ORGANISM:
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                                                                                                            2370 base pairs
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                                                                                                                                                                    612-332-9081
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Scheirlinck, Trees
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Oryza sativa
                                                      linear
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                                  DNA (genomic)
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US-08-351-413-8
; Sequence 8, Application US/08351413
; Patent No. 5750867
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                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Williams, Mark
APPLICANT: Leemans, Jan
TITLE OF INVENTION: Maintenance of male-sterile
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1919
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              SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/351,41
                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
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les 167; Conserv
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                                                                                                                                                STREET: 8110 Gateho
CITY: Falls Church
STATE: Virginia
                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                ADDRESSEE: BIRCH, STEWART, KO
                                                                                                                                     COUNTRY:
FILING DATE:
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1748..1755
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promoter"
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initiation"
                US/08/351,413
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ad, Suite
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OTHER INFORMATION:
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US-08-351-413-8
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Best Local Similarity
Matches 167; Conserv
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INFORMATION FOR SEQ ID NO: 8
SEQUENCE CHARACTERISTICS:
LENGTH: 2370 base pairs
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OTHER INFORMATION:
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LOCATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Oryza sativa
STRAIN: Akihikari
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STRANDEDNESS: doub
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                                                                                         186
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OTHER INFORMATION:
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                            CGGCGCCTACCCCGGCTCCGCTGCGGCTGCGGCCGCAGCGCTCGGGGCCCACGC
                                                           CAACCCGGGCGCGCACGAGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCGCAGGGCCC 245
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CGTCTGCAACTGCGTCAAGGACGCCGCCGCCGGCTTCCCCGCCGTCGACTTCTCCCGCGC
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/note= "sequence comprising anther specific promoter PT42"
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/note= "ATG
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site determined by primer extension"
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/note= "TATA Box"
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 2370 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                         ANTI-SENSE: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                     TOPOLOGY: 1i
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 205-8000
TELEPAX: (703) 205-8050
                                   FEATURE:
                                                                                                              FEATURE:
                                                                                                                          LOCATION: 1..1808
OTHER INFORMATION:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Leemans, Jan
TITLE OF INVENTION: Maintenance of male-sterile
TITLE OF SECULENCES: 17
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                                            OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                                                                                                           STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: US 07/899,072
APPLICATION NUMBER: US 07/899,072
FILING DATE: 12-JUN-1992
                                                                               LOCATION:
                                                                                               NAME/KEY:
                                                                                                                                                                                            NAME/KEY:
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                  NAME/KEY:
                                                                                                                                                                                                                                            ORGANISM:
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REGISTRATION NUMBER: 30,3:
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DEDNESS: double
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    Oryza sativa
Akihikari

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                                                                                                                          /label= PT42
/note= "sequence comprising anther specific
promoter PT42"
                                             /note= "TATA Box"
                                                             /label= TATA
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Patent No. !
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Best Local Similarity
Matches 167; Conserv
INFORMATION FOR
                           ATTORNEY/AGENT INFORMATION:
NAME: Mayfield, Denise L.
REGISTRATION NUMBER: 33,732
REFERENCE/DOCKET NUMBER: UTSI
TELECOMMUNICATION INFORMATION:
TELEPHONE: 713-787-1400
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Gaynor, Ri
APPLICANT: Wu, Foon W
TITLE OF INVENTION: C
TITLE OF INVENTION: Z
TITLE OF INVENTION: 7
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                                                                                                                                                                          OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1859 CATECTCGCGGCGGCGGGGGGGGGGGCGCGTGCGGTGCAGTGCGGGCAGGTGATGCA 1918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126 GGCGGCGCAGAACGGCTTCGTTGATTCCGCCGCGCGCACATGGGAGCCTTCAAGCT 185
                                                                                                                                                                                                COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                          COUNTRY: US
                                                                                                                              CLASSIFICATION: 435
                                                                                                                                             FILING DATE:
                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                         MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                             STATE:
                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: 1809
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER
OTHER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 CTGGACGCGGGTCCGCAGTTCCCGGCCATCGGGGTGGGCAGCTTCGCGCGCCGCCACCATCAC 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAACCCGGGCGCGCACGAGCTGTCCCCGGGGCCAGAGCTCGGCGTTCACGTCGCAGGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACTC-CGCCGCGGCGGCGGCGGCGGCCGCCGAGATGCAGGACCGTGAACTGAGCCT 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCGCACGTTGGCTCCTACTCTGGGCCGCCCTTCAACTCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGTCTGCAACTGCGTCAAGGACGCCGCCGCCGGCTTCCCCGCGCGTCGACTTCTCCCGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGCGCCTACCCCGGCTCCGCTGCGGCTGCCGCTGCGGCCCAGCGCTCGGGCCCCACGC
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                                                                                                                                                                                                                                                                                                        Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Application US/08242677 5677143
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                                                                                                                                                                                                                                                                                                                                         P.O. Box 4433
             713-789-2679
                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                        E: Floppy disk
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Richard B
                                                                                                                                                                                                                                                                                                                                                                                                   Cellular Nucleic Acid Binding Protein
and Uses Thereof in regulating Gene E
Treatment of AIDS
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48.7%;
                                                                                                                                                                                                                                                                                                                                                        White & Durkee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label=
/note= "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "transcription initiation
site determined by primer extension"
                                                                                                                                                           US/08/242,677
                                                             UTSD:401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
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Pred. No. 0.051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2141
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T42 gene"
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SEQUENCE CHARACTERISTICS: LENGTH: 5173 base pair

pairs

TYPE: nucleic acid STRANDEDNESS: single

FEATURE:

MOLECULE TYPE: cDNA

TOPOLOGY:

linear

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; NAME/KEY:
; LOCATION:
US-08-242-677-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Дb
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                                                                                                                         APPLICANT: Khosla, Chaitan
TITLE OF INVENTION: NON-STEROIDAL ESTROGEN-RECEPTOR
TITLE OF INVENTION: ANTAGONISTS
FILE REFERENCE: 28600-20210.00
CURRENT APPLICATION NUMBER: US/09/773,816
CURRENT FILING DATE: 2001-06-08
PRIOR APPLICATION NUMBER: US 60/243,458
PRIOR APPLICATION NUMBER: US 60/243,458
PRIOR FILING DATE: 2000-10-25
PRIOR FILING DATE: 2000-01-31
NUMBER OF SEQ ID NOS: 1
                                                                                                                                                                                                                                                                                                                                                                              US-09-773-816-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/09773816 Patent No. 6340774
                                                                                SEQ ID NO 1
LENGTH: 23673
                                                                                                                                                                                                                                                                                              APPLICANT: Stanford University APPLICANT: Khosla, Chaitan
                                                                                                               SOFTWARE: FastSEQ for Windows Version 4.0
                                              ORGANISM: Human
NAME/KEY: misc_feature LOCATION: (1)...(23623)
                                FEATURE:
                                                                  TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         779
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTTCTCGGCCAGGGCGCTCAGGACCAGCAGCTTCTCCTCTACGCGGCCGGACCCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCATCCCCGTCCCCGCCCCCCCCCCAGCGCCAGGGCGACGGCGGTCCCCGCCACCCGC- 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGCCTTCAAGCTCAACCCGGGCGCGCACGAGCTGTCCCCGGGCCCAGAGCTCGGCGTTCA 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGCCAGCGCGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTCTTCCCGGGCC 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCACGGCAGCCTCGGCGCCAGGCGCGCGCGCGAGCAGATCGCGCAGCGCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCTGTTCGGGGCCGGGCGGGCGGGCCTGCACCACGCGCACTCGGACGCGCAGGGCCACC 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---TCCAGTAGCGGCCCGTCCTCGCGGGGCCGCAAACATGGCCCGACGGCTGCTAGCACT
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1..4863
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Pred. No. 0.05;
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; OTHER INFORMATION: n = A,T,C
US-09-773-816-1
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US-08-592-874-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/08592874 Patent No. 5854034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19610
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                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: DNA SEGMENTS AN TITLE OF INVENTION: POLYSACCHARIDE NUMBER OF SEQUENCES: 1
                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US O
FILING DATE: 24-JAN-1995
ATTORNEY/AGENT INFORMATION:
NAME: GOLDBERG, JULES E.
                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          193 GGCGCGCACGAGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCGCAGGGCCCCGGCGCC 252
REGISTRATION NUMBER: 24,406
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-986-4090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
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nes 177; Conserv
                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: JULES E. GOLDBEI
STREET: 261 MADISON AVENUE
CITY: NEW YORK
STATE: NY
                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
ZIP: 10016-2391
                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                FILING DATE:
                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACCCCGGCTCCGCTGCGGCTGCCGCTGCGGCCGCAGCGCTCGGGCCCCACGCCGCAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTCGCGCCCGGCCTGTTCGGGCACGCGGGCGGCTACGAGGCCATCCTGGTGCGCGGCGCC 19609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTGGCTCCTACTCTGGGCCGCCCTTCAACTCCACCCGGGACTTCCTGTTCCGCAGCGCG 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACGTCGGCGACGATGGGCCGGCGGACAAGAGCGCTGTGCTG-----CTCGACGCGGCC 19549
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCGGGCACGACGCGGCGCACGCGAGGCATTGGCGACCTCGGTGGGGCGGACGGTCGCG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THORNE, LINDA
MIKOLAJCZAK, MARCIA
ARMENTROUT, RICHARD W.
ARMENTROUT, RICHARD W.
VENTION: DNA SEGMENTS AND METHODS FOR INCREASING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YAMAZAKI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POLLOCK, THOMAS J. YAMAZAKI, MOTOHIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10.1%;
48.2%;
                                                                                                                                                                                       US/08/592,874
                                                                                                                                                                                                                                                                                                                                                                                                                  GOLDBERG
                                                                                                               08/377,440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 184; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 50.6; DB 4;
Pred. No. 0.057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRODUCTION
                                                                                                                                                                                                                              Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 23673;
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TELEFAX: 212-818-9479
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:

LENGTH:

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QΥ
    g
                                      QΥ
                                                                                                                                                            ; ORGANISM: Sphingomonas sp. S88 US-09-096-942-2
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                                                                          Query Match
Best Local Similarity
Matches 147; Conserv
                                                                                                                                                                                                                 SEQ ID NO 2
LENGTH: 28804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2, Application US/09096942 Patent No. 6027925 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                           EARLIER APPLICATION NUMBER: 60/049,428
EARLIER FILING DATE: 1997-06-12
NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Production of xanthan Gum by Sphingomonas Bacteria TITLE OF INVENTION: Carrying Genes from Xanthomonas Campestris FILE REFERENCE: seq list for appl filed from pro. appl CURRENT APPLICATION NUMBER: US/09/096,942
CURRENT FILING DATE: 1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Pollock, Thomas J
APPLICANT: Mikolajczak, Marcia
APPLICANT: Yamazaki, Motohide
APPLICANT: Thorne, Linda
APPLICANT: Armentrout, Richard W
APPLICANT: Armentrout, Richard W
                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Ver. 2.0
14456 ATCTCGATACGCAGAAGCTCGCACAGCTCCAGGGCGCGAGCGCGATACCGTCGGCACCGG 14515
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                                      182 AGCTCAACCCGGGCGCGCACGAGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCGCAGG 241
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SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 2
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Patent No. 6030817
GENERAL INFORMATION:
APPLICANT: Pollock, Thomas J
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APPLICANT: Thorne, Linda
APPLICANT: Thorne, Linda
APPLICANT: Armentrout, Richard W
TITLE OF INVENTION: Production of Xanthan Gum by Sphingomonas Bacteria
TITLE OF INVENTION: Carrying Genes from Xanthomonas Campestris
FILE REFERENCE: seq list for appl filed from pro. appl
CURRENT APPLICATION NUMBER: US/09/096,867
CURRENT APPLICATION NUMBER: 05/09/096,867
EARLIER APPLICATION NUMBER: 60-11
EARLIER FILING DATE: 1997-06-12
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14756 ACCGCCAG 14763
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Sequence 5, Application US/09144085

Sequence 5, Application US/09144085

Patent No. 6280999

GENERAL INFORMATION:

APPLICANT: Betlach, Mary C.

APPLICANT: Betlach, Mary C.

APPLICANT: Ziermann, Rainer

TITLE OF INVENTION: SORARGIUM POLYKETIDE SYNTHASES AND ENCODING DNA

TITLE OF INVENTION: THEREFOR

FILE REFERENCE: 30062-20020.20

CURRENT APPLICATION NUMBER: US/09/144,085

CURRENT FILING DATE: 1998-08-31

CURRENT FILING DATE: 1998-01-22

NUMBER OF SEQ ID NOS: 8

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 5

LENGTH: 423

TYPE: DNA

ORGANISM: Artificial Sequence

FEATURE: INFORMATION: Description of Artificial Sequence: DNA fragment

OTHER INFORMATION: corresponding to a KS domain of Sorangium

OTHER INFORMATION: cellosporum SMP44 gene

US-09-144-085-5
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Search completed: October 10, 2002, 17:52:13 Job time : 1157.73 secs
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Maximum Match 100%
Listing first 45 s
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Maximum DB seq length: 2000000000
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Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
CE 1 (bases 1 to 642)

A trakawa,T., Carninci,P., Fukuda,S., Furuno,M., Hanagaki,T., Hara,A.,
Hiramoto,K., Hori,F., Ishii,Y., Ito,M., Kawai,J., Konno,H., Kouda,M., Koya,S., Matsuyama,T., Miyazaki,A., Nomura,K., Ohno,M.,
Okazaki,Y., Okido,T., Saito,R., Sakai,C., Sakai,K., Sano,H., Sasaki,D., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Suzuki,H.,
Tagami,M., Tagawa,A., Takahashi,F., Takeda,Y., Tanaka,T., Toya,T.,
Muramatsu,M. and Hayashizaki,Y.
RIKEN Mouse ESTs (Arakawa,T., et al. 2001)

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Email: genome-resegsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp,
Carninci.p., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Computer-based methods for the mouse full-length cDNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genome Sequences. Mamm.
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/clone_lib="RIKEN full-length enriched, 9 days embryo"
/dev_stage="9 days embryo"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
/db_xref="taxon:10090"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          with BamHI and XhoI. Vector: a modified KS(+) after bulk excision from Lambda FLC I.  
211 g 105 t 1 others
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Pred. No. 6.3e-30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 9; Length 642;
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Matches 244; Query Match

Conservative

0; Mismatches Score 224.2; DB 9 Pred. No. 1.7e-23;

Indels Length 278;

0;

Gaps

0;

Local Similarity

44.8%; 88.1%;

DB 9;

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REFERENCE
AUTHORS
TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: msoares@blue.weeg.ulowa.edu
Oligo-dT track not found, Not I site shown in beginning of sequence
is likely internal to the message. cDNA Library Preparation: M.B.
Soares Lab Clone distribution: clones will be available through
Research Genetics (www.resgen.com) This clone is also available
through the I.M.A.G.E. Consortium at LLNL (info@image.llnl.gov).
IMAGE ID-1768598
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seq primer: M13 Forward POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  451 Eckstein Medical Research Building Iowa City, IA 52242, USA
Tel: 319 335 8250
Fax: 319 335 9565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Soares, MB
Program for Rat Gene Discovery and Mapping
University of Iowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97044477
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattus norvegicus
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/New_stage adult
/New_stage adult
/Notes tage adult
/Notes tage adult
/Notes tage adult
/Notes tage adult
/Notes weeter; pTTT3D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco RI; The UI-R-C3
library is a subtracted library of a series, ultimately
derived from a mixture of individually tagged normalized
libraries from rat placenta, adult lung, brain, liver,
kidney, heart, spleen, ovary, muscle, and 8, 12 and 18-day
embryos, after a series of subtractions to reduce the
representation of cDNAs from which ESTs had already been
generated. The following serially subtracted libraries
were generated in this process: UI-R-C3, UI-R-C2p, UI-R-C3,
/UI-R-C0, UI-R-A1, UI-R-E1. The tag is a string of 3-5
nucleotides present between the Not I site and the
oligo-dT track whichallows identification of the library
of origin of a clone within themixture. The subtracted
library (UI-R-C3) was constructed as follows: PCRamplified
cDNA inserts from (UI-R-C2p clones from which 3; ESTs had
been derived was used as a driver in a hybridization with
the UI-R-C3p library in the form of single-stranded
circles. The remaining single-stranded circles (subtracted
library) was purified by hydroxyapatite column
chromatography, converted to double-stranded circles and
electroporated into DHJOB bacteria (LifeTechnologies) to
generate the UI-R-C3 library. This procedure has been
previously described (Bonaldo, Lennon and Soares, Genome
Research 6:791-806, 196)*

38 a 102 c 98 g 40 t
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/db_xref="taxon:10116"
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RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 CATCACCACTCCGCCGCGGCGGCGGCGGCGGCTGCCGCGAGATGCAGGACCGTGAACTG 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         503 bp mRNA linear EST 15-FEB-1999 qy29c02.xl NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2013410 3' similar to TR:062520 Q62520 ZIC2 PROTEIN.; contains element MSR1 repetitive element; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 503)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index (1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AI359298.1 GI:4110919
                                                                                                                                                                                                                                                                                                                                                      Seq primer: -40UP from Gibco
High quality sequence stop: 4
                                                                                                                                                                                                                                                                                                                                                                                       www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 1692 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                            DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bonaldo, Ph.D.
cDNA Library Arrayed by: Greg Lennon, Ph.D.
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                                                                                                                                                                                                                                                                                                                                    quality sequence stop: 488.
Location/Qualifiers
                                                                                                                             Ph.D.
                                   T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacla), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized, and was constructed by Bento Soares and M.Fatima Bonaldo."
                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
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UI-R-BO1-apv-h-02-0-UI.s1 UI-R-BO1 Rattus
UI-R-BO1-apv-h-02-0-UI 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Soares, MB
Program for Rat Gene Discovery and Mapping
University of Iowa
451 Eckstein Medical Research Building Iowa City,
Tel: 319 335 8250
Fax: 319 335 9565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: msoares@blue.weeg.ulowa.edu
Oligo-dT track not found, Not I site shown in beginning of sequence
is likely internal to the message. cDNA Library Preparation: M.B.
Soares Lab Clone distribution: clones will be available through
Research Genetics (www.resgen.com)
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Mammalia; Eutheria;
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                      hypothalamus, medulla, pons, midbrain, cerebral corpus striatum and hippocampus. For a detailed description of the library from which this clone derived, please visit our web site at ratest.eng.uiowa.edu. The subtraction has been pratest.eng.uiowa.edu.
                                                                                                                                                                              /Clone="UI-R-BOI-apy-h-02-0-UI"
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                                                                                                                                                                                                                                                                                                                                                                                                                                /strain="Sprague-Dawley"
/db_xref="taxon:10116"
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97.3%;
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Rodentia;
in (Bonaldo,

 Mismatches

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Sciurognathi; Muridae;
   Lennon and
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                                                                                                                                                                                                                                                                                                                           Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, US
Tel: 402 762 4366
Fax: 402 762 4390
 Similarity
                                                                                                                                                                                                    BACKWARD: GTTTTCCCAGTCACGACG
Plate: 86 row: G column: 7
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                           FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                            PCR PRimers
                                                                                                                                                                                                                                                                                 Single pass sequencing. Bases call v0.980904.e. Vector identified by
                                                                                                                                                                                                                                                                                                         Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Fahrenkrug,S.C., Freking,B.A., Rohrer,G.A., Smith,T Stone,R.T., Heaton,M.P., Grosse,W.M., Bennett,G.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST
                                                                                                                                                                                                                                                                                                                                                                                                                       Design and use of two pooled
                                                                                                                                                                                                                                                                                                                                                                                                                                       and Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota;
Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sus scrofa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ummalia; Eutheria; Cetartiodactyla; Suina; Suidae; (bases 1 to 487)
                                                                                                                                                                                                                                                                       -minmatch 12
                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MARC
                                                /note="Vector: pCMV SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from testis, ovary, endometrium, hypothalamus, pituitary, and placenta." a 192 c 152 g 74 t
                                                                                                                                 /organism="Sus scrofa"
/db_xref="taxon:9823"
/clone_lib="MARC 2PIG"
                                                                                                         /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                       location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6:791-806, 1996)
TAG_SEQ=None fou
179 c 140
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22.6%;
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                                                                                                                                                                                                                                                                       options.
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Sus scrofa cDNA 5', mR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 157; DB Pred. No. 7.3e 0; Mismatches
Score 113.2; DB 10; Pred. No. 1.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
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140 g
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7.3e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence
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           Length 487;
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                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA libraries for
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Sus.
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FEATURES
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KEYWORDS
SOURCE
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AI894008
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAACTCCACCCGGGACTTCCTGTTCCGCAGCGCGCGGGCTTCCGGGGGACTTCGGCGCGGG 398
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                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
Other_ESTs: mg08e03.x1
Contact: Marra M_WashU-NCI Mouse EST Project
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                        This clone is available royalty-free through LLNL; IMAGE Consortium (info@image.llnl.gov) for further This read is a RESEQUENCE of a previously sequenced This read has been verified (found to hit its origin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Pe,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ri,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R. and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
AI894008
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                                                                                                                                                                                                             MGI:257748
                                                                                                                                                                                                                           correct orientation)
                                                                                                                                                                                                                                                                                                          Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                 The WashU-NCI Mouse
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                                                                                                                                                                                       primer: -40RP from Gibco
                                                                                                                                                     quality sequence stop: Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MOUSE);, mRNA sequence.
/tissue_type="embryo"
/dev_stage="13.5~14.5dpc
                                                  /clone_lib="Soares mouse
                                                                      /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="taxon:10090"
/clone="IMAGE:423196"
                                     /sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST Project
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Sciurognathi; Muridae;
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Ritter
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BASE COUNT
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mg08e03.rl Soares mouse embryo NbME13.5 14.5 Mus musculus cDNA clone IMAGE:423196 5' similar to gb:D32167 Mouse mRNA for zic protein (MOTEE). mens common
                                                               Unpublished (1996)
Contact: Marra M/Mouse EST Project
WashG-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                 Marra, M., Hillier, i., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 455)
                           Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W97217.1 GI:1427121
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mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T 3'], on equal amounts of mRNA from 2 13.5dpc and 2
14.5dpc embryos (total RNA provided by Minoru Ko, Wayne State Univ., from 2 ]; double-stranded cDNA was ligated to Eco RI adaptors (pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT/T3 vector. Library went through one round of normalization, and was constructed by Bento Soares and M.Fatima Bonaldo.

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Pred. No. 6.8e-07;
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                                                                                                                                                                                                                                                                                                                                                                      399 CGGCGGCAGCACGGCTGTTCG-----GGCCGGGCGGCGGGCGGCCTGCACCACGCGC
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           fruit fly.

Drosophila melanogaster

Eukaryota; Metazoa; Art
                                                                                                                                         Drosophila melanogaster genome survey sequence T7 end of BAC # BACR14N09 of RPCI-98 library from Drosophila melanogaster (fruit
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                    GSS
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/dev_stage="13.5-14.5dpc total fetus
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/sex="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:10090"
/clone="IMAGE:423196"
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Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Neoptera; Endopterygota; Diptera; Brachycera;
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0.0003;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9 GGACGCGGGTCCGCAGTTCCCGGCCATCGGGGTGGGCAGCTTCGCGCGCCACCATCACCA 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - Web: www.genoscope.cns.fr)

Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY The library is named RPGI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic strain y2; cn bw sp, the same strain used for the BDGP's Pl and EST libraries. A more detailed description of the Ibrary and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be contain/Qualifiers
                                                                                                                                                                  GGGCGCGGCCGGCCTGCACC 445
                                                                                                                                                                                                     GSASGCGCGCGMGCRAGSGKMGSAGSSGRCGGACSGSGGSBSSSKRKGGASGCASCSSAY 516
                                                                                                                                                                                                                                                                                 GCCCSCGCGCGCGCGCCCCCGGCAGCSCASGCSSGMAGYAGSGASRSVYSGGSSSS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140;
CNS0072Q 932 bp DNA linear GSS 03-JUN Drosophila melanogaster genome survey sequence T7 end of BAC #
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1 (bases 1 to 935)
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/db_xref="taxon:7227"
/clone_lib="RPCI-98"
/clone="BACR14N09"
/note="end : T7"
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BACR14B09 of RPCI-98 library from Drosophila melanogaster (fruit fly), genomic survey sequence.
AL066742
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collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic strain y2; cn bw sp. the same strain used for the BDGP's Pl and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be found at http://bacpac.med.buffalo.edu/drosophila\_bac.htm. Web: www.genoscope.cns.fr)
 Determination of this BAC-end sequence was carried out as part of a Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 932)

/organism="Drosophila melanogaster" /db\_xref="taxon:7227" /clone\_lib="RPCI-98" /clone="BACR14809" /note="BACR14809" /note="end : T?" g 202 c 241 g 91 t 243 243 others

3 GCTCCTGGACGCGGGTCCGCAGTTCCCGGCCATCGGGGTGGGCAGCTTCGCGGCGCCACCA 62 Conservative 108; Mismatches 195; Indels Score 83.6; DB Pred. No. 0.0023 DB 12; Length 932; 1; ۲,

479 GTKBCKGGGKGGCBKGCKGGCGGGGGGGGGVCGRGGGSGGGGCGGGKGCGCKGCTS 538

CCTGGCGGCGCGCAGAACGGCTTCGTTGATTCCGCCGCCGCGCACATGGGAGCCTTCAA 182 

183 GCTCAACCCGGGCGCACGAGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCGCAGGG 242

243 CCCCGGCGCCTACCCCGGCTCCGCTGCGGCTGCGGCCGCAGCGCTCGGGCCCCA 302 CSCSGGCSSCGCSCCCSCCCCSCCCCSSCGCSSSSGCGGSGGCSSGCGSCGCGSCGGS

CGCCGCGCACGTTGGCTCCTACTCTGGGCCGCCCTTCAACTCCACCCGGGACTTCCTGTT 362

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The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org The BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic strain 92; on bw sp, the same strain used for the BDGP's pl and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be found at http://bacpac.med.buffalo.edu/drosophila_bac.htm.
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CCGCTGCGGCTGCCGCTGCGGCCGCACGCTCGGGCCCCACGCTCGCGCACGTTGGCTCCT 322
                                                                                                                                                              AGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCGCAGGGCCCCCGGCGCCTACCCCGGCT 262
                                                                                                                                                                                                                                                 SSGTSSACVKCNASSSCGCCGCGMABCCMCSSSSSCCGSASARGVKVRASGGAGKRGGGS
                                                                                Drosophila melanogaster genome sur BACR19D16 of RPCI-98 library from
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage BP 191 91006 EVRY cedex - FRANCE (B-mail : seqref@genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 925)
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/Clone="BACR19D16"
/note="end : TET3"
a 61 c 61 g
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/db_xref="taxon:7227"
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BP 191 91006 EVRY cedex - FRANCE (E-mail : segrefégenoscope.cns.fr
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/db_xref="taxon:7227"
/clone_lib="RPCI-98"
/clone="BACR19D16"
/clone="BACR19D16"
/note="end: TET3"
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16.0%; Pred. No. 0.0067;
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                                                                                                                                                       Local Similarity
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                                                                  GCGCGGCTTCCGGGGACTTCGGCGCCGGGCGGCG 403
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pan troglodytes DNA, clone: PTB-051K02.R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fujiyama,A., Hattori,M., Toyoda,A.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fujiyama, A., Hattori, M., Toyoda, A., Totoki, Y., Watanabe, H. and Sakaki, Y.
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R.Site 2 : SacI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tracking errors.
                                                                                                                                                                                                                 /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee Male BAC Library"
404 c 352 g 8 t 38 others
                                                                                                                                                                                                                                                                            /sex="male"
                                                                                                                                                                                                                                                                                          /clone="PTB-051K02.R"
                                                                                                                                                                                                                                                                                                            /db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                                                            organism="Pan troglodytes"
                                                                                                                                                                                                                                                                                                                                                1. .821
                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                      15.7%;
                                                                                                                                    Score 78.4; DB 12; Pred. No. 0.013; 0; Mismatches 218;
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genomic survey
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ORIGIN
                                                                   BASE COUNT
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Query Match
Best Local Similarity
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AG081191. GI:16632993
GSS; GSS (genome survey sequence).
Pan troglodytes male lumnhohing.
                                                                                                                                                                                                                                                                                                                         Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC endwas generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                                                                 clone tracking errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAC end sequences
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Totoki,Y., Watanabe,H. and Sakaki,Y.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                    LIBRARY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; GSS (genome survey sequence).
troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male
Library clone:PTB-077J08.F.
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R.Site 2
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                                                                                                                                                                                                                                                    Vector
                                                                                                                                                                                                                                                                                   Sequencing: -21M13
                                                                                                                           /organism="Pan troglodytes"
/db_xref="taxon:9598"
/Clone="PTB-077J08.F"
                                                            /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee
382 c 553 g 32 t
                                                                                                                  /sex="male"
                                                                                                                                                                                      Location/Qualifiers
1. .1369
 15.4%;
47.2%;
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SacI.
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                                        AL Submitted (02-JUN-1999) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (E-mail : seqref@genoscope.cns.fr)
- Web : www.genoscope.cns.fr)
Determination of this BAC-end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP).
The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information please see http://www.fruitfly.org.the BDGP Drosophila melanogaster BAC library was prepared by Kazutoyo Osoegawa and Aaron Mammoser in Pieter de Jong's laboratory in the Department of Cancer Genetics at the Roswell Park Cancer Institute in Buffalo, NY. The library is named RPCI-98 and was constructed by partial EcoRI digestion of Drosophila DNA provided by the BDGP from the isogenic Strain y2; cn bw sp, the same strain used for the BDGP's pl and EST libraries. A more detailed description of the library and how to order individual BAC clones, the entire library, or filters for hybridization from the BACPAC Resource Center can be found at http://bacpac.med.buffalo.edu/drosophila_bac.htm.
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ALO66742
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/organism="Drosophila
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Neoptera; Endopterygota; Diptera; Brachycera;
a; Ephydroidea; Drosophilidae; Drosophila.
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                                    COMMENT
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                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                            AUTHORS
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715 CGGSCCGSCGCGGGGGGGGGSGCSSGGCGGSSGCCGGCSCCSSGCCSSGC
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Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, UKL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                                                                                                                                                                        AG041117.1 GI:16569842
AG041117.1 GI:16569842
GSS; GSS (genome survey sequence).
Pan troglodytes male lymphoblast DNA,
BAC Library clone:PTB-018L17.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGU41117 976 bp DNA Pan troglodytes DNA, clone: PTB-018L17.F,
                                                                                                                                                                                                                                                                                             Fujiyama, A., Hattori, M., Toyoda, A., Totoki, Y., Watanabe, H. and Sakaki, Y.
                                                                                                                                                                                   Fujiyama, A., Hattori, M., Toyoda, A., Totoki, Y., Watanabe, H. and Sakaki, Y.
                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                             Eukaryoia; Metazoa; Chordata; Craniata; V
Mammalia; Eutheria; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                          Pan troglodytes
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/clone_lib="RPCI-98"
/clone="BACR14809"
/note="end: T7"
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Search completed: October 10, 2002, 20:27:22 Job time: 701.733 secs
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                                                                                                                  GGGCGCGGGCGCCTGCACCACGCGCACTCGGACGCGCAAGGGCCACCTCCTCTTCCCGGG 485
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LIBRARY
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R.Site 2
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1.976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cell_type="lymphoblast"
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287 c 495 g 51 t 84 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /sex="male"
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/clone="PTB-018L17.F"
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Maximum Match 100%
Listing first 45 summaries
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       500
500
113.2
105.2
68.2
64.2
60
57
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10107.424 Million cell updates/sec
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AAX53491
AAC56076
AAC56714
       AAL36353
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                        Human Zicl gene.
Mouse ischaemic co
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Human adenosine Al
Eucalyptus grandis
Eucalyptus grandis
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Lung small cell ca
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	AAH26500 AAT37329 AAT92474 AAV99812 AAV81474 AAS08693						
Streptomyces sp. C Nucleotide sequenc Human PRO1487 (UNQ Human DNA encoding	Rabbit low density sphingan biosynthe Sphingomonas genus Sphingomonas S88 s Sphingomonas Iragme Micromonospora DNA	Sequence comprisin Human Immunodefici Pseudomonas aerugi Human derived adre	Streptomyces livid 4-amino-4-deoxycho	Triticum sp. cyste Human transporters Human HCN2 cDNA. DNA encoding centr Human ORFY ORFY65	DNA encoding novel DNA encoding novel DNA encoding novel Nucleotide sequenc Rabbit low density	Human EST-derived S. cellulosum DNA Platenolide syntha Platenolide syntha Platenolide syntha	Streptomyces nours Streptomyces nours HSV-2 immediate ea Human herpesvirus Human herpesvirus Mycobacterium tube

## ALIGNMENTS

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RESULT 1
AAD11112
ID AAD1
  Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; synovial sarcoma; cytostatic; ZIC2; ds.
                                                                                                                                                                                                                                                                 Human small cell lung cancer associated gene, ZIC2
                                                                                                                                                                                                                                                                                                              AAD11112;
                                                                                                                                                                                                                                                                                                                                    AAD11112 standard; DNA; 1602 BP
                                                                                                                WO200153349-A2.
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(LUDW-) LUDWIG INST CANCER RES.
(SLOK ) SLOAN KETTERING INST CANCER RES.
(CORR ) CORNELL RES FOUND INC.
                                           21-JAN-2000; 2000US-0489101.
                                                                 19-JAN-2001; 2001WO-US02015.
                                                                                                                                                                                              Homo sapiens
                                                                                         26-JUL-2001.
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                                                                                                                                                            Location/Qualifiers
1..1602
                                                                                                                                     /*tag= a
/product= "Human ZIC2 protein"
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RESULT 2
AAS61863
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           AAS61863 standard; cDNA; 1602 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by isolated nucleic acid comprising an NA Group 3 or 4 molecule -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1602 BP; 275 A; 578 C; 536 G; 213 T;
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The invention relates to novel isolated lung small cell cancer antigen copyrucleotides (I) and polypeptides (II) used in a method of detecting cancer in a patient. The method is optionally performed by cutilising oligonucleotides (III), where the biological sample from the patient is contacted with (III), detecting the amount of polynucleotide hybridised to (III) in the sample and comparing the amount of polynucleotide to a predetermined cut-off value and thereby determining cancer in a patient. (I), (II) or antigen-presenting cells expressing (II) is useful for stimulating and/or expanding T cells specific for a tumour protein. The method comprises contacting T cells specific for a tumour protein. The method comprises contacting the and/or expansion of the components under conditions to permit the stimulation and/or expansion of the cells. A composition comprising (I) is useful for stimulating and/or expansion of the cells. A composition comprising (I) is useful for stimulating and for inhibiting the development of cancer in a patient. An absoluted T cell population is useful for removing tumour cells from the biological sample and for inhibiting the development of cancer in a patient. AASS1460-AASS1874 represent novel human lung small cell
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14-SEP-2000;
19-DEC-2000;
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21-JUN-2000;
01-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1602 BP; 275 A; 578 C; 536 G; 213 T; 0 other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer antigen coding sequences of the invention.
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                             121 AGCCTGGCGGCGGCAGAACGGCTTCGTTGATTCCGCCGCGCGCACATGGGAGCCTTC
                                                                                                                         AGCCTGGCGGCGCGCAGAACGGCTTCGTTGATTCCGCCGCGCGCACATGGGAGCCTTC
                                                                                                                                                                                     CATCACCACTCCGCCGCGGCGGCGGCGGCCGCCGAGATGCAGGACCGTGAACTG
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2000US-232565P.
2000US-257037P.
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100.0%; Pred. No. 3e-75;
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                                                                    Converting epidermal cells into neurons, useful for isolating nerve growth factors or for gene therapy, comprises dedifferentiating cel and transfecting with vectors with a cDNA coding neurogenic transcription factors
The present sequence is the human Zicl gene from Genbank. It was used to provide sequence information for the cloning of Zicl cDNA, which was used to transfect cultured epidermal cells. This was
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vasospastic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse ischaemic condition related cDNA sequence SEQ ID
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                                                             WPI; 2002-034733/04
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                                                                                                                                                                                                                                                       18-MAY-2000; 2000JP-0145977.
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                                                                                                                             Asai S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       compressive ischaemia; occlusive ischaemia,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                    Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; colon cancer; breast cancer; lung cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the protein sequences in ABB57020 to ABB57374) or by determining the expression profile of a gene group comprising these genes. The expression levels or expression profiles produced by these genes are used as an indicator when screening for ischaemic condition improving drugs or therapeutics for ischaemic diseases. ABI99913 and ABI99914 represent PCR primers for a mouse ischaemic condition related sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes a method for examining ischaemic conditions, comprising measuring the expression levels of particular genes (I) in a test sample or determining the expression profile of a gene group in the sample comprising genes selected from (I). The method is useful for examining the ischaemic condition (e.g. compressive ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring expression levels of particular genes (ABI9922 to ABI99912, encoding
prostate cancer;
                                                                                                                                                                                                                                              Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                    AAX53491 standard; DNA; 114955 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2947 BP; 659 A; 818 C; 787 G; 683 T; 0 other;
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                   hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  932 TACGGACGCCGCGGCCACCTCCTTTTTCTGGGCTTCACGAGCAG 977
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      752 TGCGGCCCTGGGCCACCATCACCACCCCGGCCACGTCGGCTCCTACTCCAGCGCTGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       219 GAGCTCGGCGTTCACGTCGCAGGGCCCCGGCGCCTACCCCGGCTCCGGCTGCGGCTGCCGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        determining the expression profile of a gene group comprising these
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCGGACGCCAGGGCCACCTCCTCTTCCCGGGCCTGCCAGAGCAG 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCGGGCAGCACGGGCTGTTCGGGCCGGGCGGCGGCCT-----GCACCACGCGCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            are used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 191-194; 2690pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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CC directed against at least 2 mRNAs selected from target genes, coding and conor-coding regions of RNAs corresponding to target genes, coding and composite the coding regions of RNAs corresponding to target genes, gene coding regions, the 3'-end and the juxta-section between coding and non-coding cregions and all segments of RNAs encoding proteins associated with one coding composite the diseases, conditions or mixtures. The antisense oligonucleotides coding end proteins associated with one coding proteins associated with one coding proteins associated with one coding conditions or mixtures. The antisense oligonucleotides coding lung diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and conditions are those associated with impaired respiration, impeded conditions are those associated with impaired respiration, impeded condition, respiratory distress syndromery vasoconstriction, continuous conditions and concers syndrome, pain, cystic fibrosis, complayment, propertension, pulmonary vasoconstriction, emphysema, chronic constructive pulmonary disease (COPD), and cancers such as leukemias, concerning cancer, breast cancer, helanoma, cancinoma, cancinoma, kidney cancer, melanoma, concerning concerning cancer, melanoma, concerning concerning cancer, melanoma, concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning concerning con
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Sequence 114955 BP; 6071 A; 29417 C; 36712 G; 21328 T; 21427 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 37; 120pp;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-SEP-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                        135 GCAGAACGGCTTCGTTGATTCCGCCGCCGCGCACATGGGAGCCTTCAAGCTCAACCCCGGG 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15 GGGTCCGCAGTTCCCCGGCCATCGGGGTGGGCAGCTTCGCGCGCCACCATCACCACCTCCGC 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                          TGGCTCCTACTCTGGGCCGCCCTTCAACTCCACC-CGGGACTTCCTGTTCCGCAGCGCGC 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BGGCCBGGGCGCGCCGGCCGGGCCGSNNNDNNGGCCBGGGCGCCGCCGGCCGGGCC 105064
                                                                                                                  CCCCGGCTCCGCTGCCGCTGCCGCTGCGGCCCCCACGCCCCACGCCGCGCACGT 314
                                                                                                                                                                                                                                 CCGGGCCGSNNNDNNGGGCGCGCCGCCGGCCGGCCGSNNNDNNGGCGCGCCGCCGCCG 10524
                                                                                                                                                                                                                                                                                      CGCGCACGAGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCGCAGGGCCCCGGCGCCTA 254
                                                                                                                                                                                                                                                                                                                                                CGGGCCGSNNNDNNCBGGGCGCGCCGGCCGGGCCGSNNNDNNBGGGCGCGCCGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGSNNNDNNGCCBGGGCGCCGCCGGCCGGCCGGSNNNDNNCCBGGGCGCCGCCGCCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCGGCGGCGGCGGCTGCCGCCGAGATGCAGGACCGTGAACTGAGCCTGGCGGCGGC 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 114955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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CC directed against at least 2 mRNAs selected from target genes, coding and con-coding regions of RNAs corresponding to target genes, gene coding and concoding regions, intron-exon borders, the cc initiation codons, genomic flanking regions, intron-exon borders, the cc frequency of the juxta-section between coding and non-coding cc regions and all segments of RNAs encoding proteins associated with one cc or more diseases, conditions or mixtures. The antisense oligonucleotides (CC may be derived from sequences AAX55272-74. These multiple target coligonucleotides (specifically AAX55272-74. These multiple target coligonucleotides (specifically AAX55280-271) can be used for the cc antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and cc inflammation, including lung diseases, pulmonary vasoconstriction, cf inflammation, including lung diseases, pulmonary vasoconstriction, conditions, respiratory distress syndrome, pain, cystic fibrosis, cc inflammation, respiratory distress syndrome, pain, cystic fibrosis, colomary hypertension, pulmonary vasoconstriction, emphysema, chronic constructive pulmonary disease (COPD), and cancer, buncaer, buncaer, melanoma, melanoma, carcinomas, e.g. colon cancer, breast cancer, melanoma, melanoma, construction metastasise and types of cancers which may metastasize for the discussive constraints and recertain cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiration; pulmonary distress syndrome; paln; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepaticeric metastasis;
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17-SEP-1997;
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have metastasized to the lungs, including breast and prostate
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97US-0059160
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WPI; 2000-579369/54
                                                                     Wood M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eucalyptus grandis transcription factor DNA sequence #207.
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                                                                                                                                                                                                                                                         11-MAR-1999;
18-AUG-1999;
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                                                                                                                                                   (FLET-)
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                                                                                                                                                                                (GENE-) GENESIS RES & DEV CORP LTD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      345 CACCCGGGACTTCCTGTTCCGCAGCGCGCCGCCTTCCGGGGACTTCGGCGCGGCGGCGGCGG
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                                                                                                                                               FLETCHER CHALLENGE FORESTS LTD.
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                                                                     McGrath A,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                         99US-0266513.
99US-0149485.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12.8%; Score 64.2; DB 20; 36.4%; Pred. No. 0.0059;
                                                                             Shenk MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32;
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                                                                         Glenn M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247;
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Best Local
  11-MAR-1999;
                                  09-MAR-2000; 2000WO-US06112.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention relates to novel plant transcription factors from Eucalyptus grandis or Pinus radiata. The present sequence is the coding sequence for one such transcription factor. The transcription factor may be used to produce a plant having modified gene expression such as a woody plant e.g. a eucalyptus, pine, acacia, poplar, sweetgum, teak, or mahogany species or to modify the activity of a polypeptide in a plant. The transcription factors of the present invention are members from the following families of regulatory proteins: ball, ball family of g-box binding factors, basic helix-loop-helix zipper, LIM domain, AP2 and ERBBs, zinc finger domains of type 2 Cys2His2, CCAAT box elements
                                                                                                                                               Eucalyptus grandis.
                                                                                                                                                                                                  Plant; transcription factor; gene expression; eucalyptus; pine; acaci poplar; sweetgum; teak; mahogany; bZIP; G-box binding factor; basic helix-loop-helix zipper; homeotic; homeodomain; homeobox; MADS; homeodomain; zipper; LIM domain; AP2; EREBs; zinc finger domain;
                                                                                                                                                                                                                                                                                                                                                                                                            AAC56714 standard; DNA; 438 BP.
                                                                                                             WO200053724-A2.
                                                                                                                                                                                                                                                                                             Eucalyptus grandis transcription factor DNA sequence #585.
                                                                                                                                                                                                                                                                                                                                     25-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated polynucleotide encoding a plant transcription factor for producing a plant e.g. a woody plant, preferably eucalyptus or pine, having modified gene expression or modified activity of a polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 438 BP; 66 A; 196 C; 111 G; 65 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 100; 747pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       370
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCCGCCGCCCCCGGCCGCCAGCGGGGTGAGCGT 405
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTCGGCGTTCACGTCGCAGGGCCCCCGGCCTACCCCGGCTCCGCTGCGGCTGCCGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGACGACCAGCCGACCTCGAGCACCTCCGCGGCGACGACCTCCTCCGGCGTCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGAGATGCAGGACCGTGAACTGAGCCTGGCGGCGCGCGCAGAACGGCTTCGTTGATTCCGC 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGCGGCCACAAGGCCAGCCACCGCAAGCACGCCTCCTCCGCCGCGGCGGCCGCCGGGGGGG 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTGGGCAGCTTCGCGCGCCACCATCACCACTCCGCCGCGGCGGCGGCGGCGGCGGCTGCCGC 98
                                                                                                                                                                                      Cys2His2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                                                                                                                      CCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12.0%;
                                                                                                                                                                                    box element; MYB; ss
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches 135; Indels
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0.059;
                                                                                                                                                                                                                                                      eucalyptus; pine; acacia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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RESULT 9
AAL36353/
ID AAL3
XX AC AAL3
XX OB-J
Y
XX OB-J
Y
XX Cyto
XX Cyto
KW Cyto
KW anti.
KW vuln
KW card
KW card
XX unusc
XX musc
XX musc
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Best Local
                                         Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antialiergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disordencerological disease; infection; human; secreted protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eucalyptus grandis or Pinus radiata. The present sequence is the coding sequence for one such transcription factor. The transcription factor may be used to produce a plant having modified gene expression such as a woody plant e.g. a eucalyptus, pine, acacia, poplar, sweetgum, teak, or mahogany species or to modify the activity of a polypeptide in a plant. The transcription factors of the present invention are members from the following families of regulatory proteins: bZIP, bZIP family of G-box binding factors, basic helix-loop-helix zipper, LIM domain, AP2 and EREBs, zinc finger domains of type 2 Cys2His2, CCAAT box elements
                                                                                                                                                                     Human musculoskeletal system related polynucleotide SEQ ID NO 2718
                                                                                                                                                                                                                 08-JAN-2002
                                                                                                                                                                                                                                                                                                  AAL36353 standard; DNA; 9968 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 438 BP; 65 A; 195 C; 111 G; 65 T; 2 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention relates to novel plant transcription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 498; 747pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated polynucleotide encoding a plant transcription factor for producing a plant e.g. a woody plant, preferably eucalyptus or pine, having modified gene expression or modified activity of a polypeptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-AUG-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GENE-) GENESIS RES & DEV CORP LTD
                                                                                                                                                                                                                                                                                                                                                                                                         370 CGCCGCCGCCGCCCGGCCGGCCAGCGGGGTGAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   279 TGCGGCCGCAGCGCTCGGGCCCCACGCGCGCGCACGT 314
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGCGGCCACAAGGCCAGCCGCAAGCACGCCTCCTCCGCCGCCGCCGCCGCCGGGGG 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0149485.
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51.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shenk MA, Glenn M;

    Mismatches

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Pred. No. 0.059;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21; Length 438;
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0;

musculoskeletal system; ds.

PR 14-SEP-2000; 2000US-023364.  PR 14-SEP-2000; 2000US-023365.  PR 12-SEP-2000; 2000US-023365.  PR 21-SEP-2000; 2000US-0234223.  PR 21-SEP-2000; 2000US-0234274.  PR 25-SEP-2000; 2000US-0234999.  PR 25-SEP-2000; 2000US-0234998.  PR 26-SEP-2000; 2000US-0234984.	14-SEP-2000 14-SEP-2000 14-SEP-2000 14-SEP-2000	08-SEP-2000 08-SEP-2000 12-SEP-2000	08-SEP-2000 08-SEP-2000 08-SEP-2000 08-SEP-2000	01-SEP-2000 05-SEP-2000 05-SEP-2000 06-SEP-2000 06-SEP-2000	30-AUG-2000 30-AUG-2000 01-SEP-2000 01-SEP-2000	18-AUG-2000 22-AUG-2000 22-AUG-2000 22-AUG-2000	14-AUG-2000 14-AUG-2000 14-AUG-2000 14-AUG-2000 14-AUG-2000	14 - AUG - 2000; 14 - AUG - 2000;	11-JUL-2000; 11-JUL-2000; 14-JUL-2000; 26-JUL-2000; 26-JUL-2000; 14-AUG-2000;	19-MAY-2000; 07-JUN-2000; 28-JUN-2000; 30-JUN-2000; 07-JUL-2000; 07-JUL-2000;	31-JAN-2000; 04-FEB-2000; 04-FEB-2000; 24-FEB-2000; 02-MAR-2000; 16-MAR-2000; 17-MAR-2000;	WO200155367- 02-AUG-2001. 17-JAN-2001;	Homo sap
DEC-2000; 20000 DEC-2000; 20000 DEC-2000; 20000 DEC-2000; 20000 DEC-2000; 20000 JAN-2001; 20010	05-DEC-2000; 20000 05-DEC-2000; 20000 06-DEC-2000; 20000 08-DEC-2000; 20000 08-DEC-2000; 20000	17-NOV-2000; 20000 01-DEC-2000; 20000 01-DEC-2000; 20000 05-DEC-2000; 20000	17-NOV-2000; 2000U 17-NOV-2000; 2000U 17-NOV-2000; 2000U 17-NOV-2000; 2000U	17-NOV-2000; 20000 17-NOV-2000; 20000 17-NOV-2000; 20000 17-NOV-2000; 20000 17-NOV-2000; 20000	17-NOV-2000; 20000 17-NOV-2000; 20000 17-NOV-2000; 20000 17-NOV-2000; 20000	08-NOV-2000; 20000 17-NOV-2000; 20000 17-NOV-2000; 20000 17-NOV-2000; 20000	08-NOV-2000; 20000 08-NOV-2000; 20000 08-NOV-2000; 20000 08-NOV-2000; 20000 08-NOV-2000; 20000	R 08-NOV-2000; 20000 R 08-NOV-2000; 20000 R 08-NOV-2000; 20000 R 08-NOV-2000; 20000 R 08-NOV-2000; 20000 R 08-NOV-2000; 20000	R 01-NOV-2000; 20000 R 01-NOV-2000; 20000 R 08-NOV-2000; 20000 R 08-NOV-2000; 20000 R 08-NOV-2000; 20000 R 08-NOV-2000; 20000	PR 20-CCT-2000; 2000US-0241221. PR 20-CCT-2000; 2000US-0241785. PR 20-CCT-2000; 2000US-0241786. PR 20-CCT-2000; 2000US-0241786. PR 20-CCT-2000; 2000US-0241808. PR 20-CCT-2000; 2000US-0241809. PR 20-CCT-2000; 2000US-0241809.	02-0CT-2000; 20000 02-0CT-2000; 20000 02-0CT-2000; 20000 02-0CT-2000; 20000 13-0CT-2000; 20000 13-0CT-2000; 20000 13-0CT-2000; 20000	R 29-SEP-2000; 2000U R 29-SEP-2000; 2000U R 29-SEP-2000; 2000U R 29-SEP-2000; 2000U R 29-SEP-2000; 2000U R 29-SEP-2000; 2000U	R 27-SEP-2000; 2000U R 27-SEP-2000; 2000U

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RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to novel genes (AAL34669-AAL37666) and proteins (ABB03087-ABB04109) associated with the musculoskeletal system useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (antiagonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isolated polypeptide for treating, preventing and/or prognosing disorders related to the musculoskeletal system including musculoskeletal cancers and also for testing and detection e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 9968 BP; 2324 A; 2302 C; 2695 G; 2647 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 parasitic infections.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; SEQ ID NO 2718; 781pp + Sequence Listing; English
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                                                                                                     465
                                                                                                                                      124
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                                                                                                                                                                                                                                      345
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                                                                     64
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                     GCCGCCCGCCTGCGCCCGGCCCGCCGCCGC
                                                                                                   G-GGCCACCTCCTCTCCCGGGCCTGCCAGAGC 496
                                                                                                                                      GCTGTTGAAGCGGTCCTCCAGGCGGACGCGCACGGCCTTGGCCCCGGGCCTCGGGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGGACCGTGAACTGAGCCTGGCGGCGCGCAGAACGGCTTCGTTGATTCCGCCGCCGC 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCTTCGCGCGCCACCATCACCACTCCGCCGCGGCGGCGGCGGCGGCGGCGGCGAGAT 104
                                                                                                                                                                     GCAGCACGGGCTGTTCGGGCCGGGCCGGGCCGCGCACCACGCGCACTCGGACGCGCA 464
                                                                                                                                                                                                                                   CACCCGGACTTCCTGTTCCGCAGCGCGCGCGCTTCCGGGGACTTCGGCGCCGGCGGCGG
                                                                                                                                                                                                                                                                     CGCAGCGCTCGGGCCCCACGCCGCCCACGTTGGCTCCTACTCTGGGCCGCCCTTCAACTC
                                                                                                                                                                                                                                                                                                                                     GCCGTCGGGTCCAGCCGCAGCCGCAGCCGCGCCCCCTCCTTGGCGGCGCGCCGTCGGC
                                                                                                                                                                                                                                                                                                                                                                    GGCGTTCACGTCGCAGGGCCCCGGCGCTACCCCGGCTCCGCTGCGGCTGCCGCTGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                 GCACATGGGAGCCTTCAAGCTCAACCCGGGCGCGCGCACGAGCTGTCCCCGGGCCAGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-451937/48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Barash SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11.4%;
46.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ruben
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches 240; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 57; DB 2
Pred. No. 0.13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 22; Length 9968;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                                                     284
                                                                                                                                                                                                                                                                                                                                                                                                    305
                                                                                                                                                                                                                                                                                                                                                                                                                                     224
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   CDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polyketide synthase; PKS; macrolide; nystatin; PKS gene cluster; antifungal; antibiotic; nys1; ds.
 (ALPH-)
                                  (UYNO-)
                                                                                                  08-FEB-2000;
10-APR-2000;
                                                                                                                                                    08-FEB-2001;
                                                                                                                                                                                   16-AUG-2001
                                                                                                                                                                                                                    WO200159126-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAD17184 standard; DNA; 65140
                                                                                   14-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-NOV-2001
UNIV NORGES TEKNISK NATURVITENSKAPELIGE
SINTEF STIFTELSEN IND TEK FORSK.
ALPHARMA AS.
SINVENT AS.
                                                                                 ; 2000GB-0002840.
; 2000GB-0008786.
; 2000GB-0009387.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 noursei nysl DNA of nystatin PKS gene cluster
                                                                                                                                                    2001WO-GB00509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                 /note= "CDS does not include 63765.64981 /*tag= m
                                                                                                                                                                                                                                                                                                                                            /product= "NysR5 protein"
/note= "CDS does not include
complement (62551..63615)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers complement (1..1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (1056..2576)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "NysD2 partial protein"
/note= "CDS does not include stop codon"
                                                                                                                                                                                                                                                   /product= "ORF1 protein"
                                                                                                                                                                                                                                                                                                                  /product= "ORF2 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "NysR4 (short) protein"
/note= "CDS does not include start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 54329..57190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= g
/product= "NysR1 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "Nysc
50260..51015
                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "NysR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product= "NysR2 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product= "NysE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'product= "NysB protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= c
/product= "NysA protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6550..49840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 product= "NysD1 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06..6906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .16530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..61047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..54305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      does
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    not include
                                                                                                                                                                                                                                                                                                    start codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      start codon"
                                                                                                                                                                                                                                                                                                                                                                    start codon"
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밁 QΥ Вþ Ω В QΥ 망 δÃ 밁 Ωy В Ωy В δÃ 밁 δÃ

AAD17184

(DZIE/)

SEKU/)

AAE10131,

Valla Zotchev SB,

ŝ

(STRO/) (BRAU/)

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18987 TGCTGTCCGCCATGGCCCAGGAATCCCTGCCGGACGGCGCCGCCGCCGCCGCCGCTGCTGC 19046
                                                                                                        19467 TGGTGCTGCCCGAGC 19481
                                                                                                                                                                                                                                                                                                                                                     19227 TCACCGCCGGGGACTGGGCGCCGCCGACCACCCGCTGCTCGGCCGCCACCGTCGAACTCG
                                                                                                                                                                                                                                                                                                                                                                                                                19167 CCACCTACCCCTTCCAGCACCAGCGGTTCTGGCCGACCGCGGCCGCCGCCCCCAGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19047 GCAAGGACCGCCCGAGGAGCTCTCCGCCGTCACCGGCCTGGCCCGCGCCCACGTCCGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to the cloning and sequencing of the cluster encoding a modular type I polyketide synthase (PKS) enzyme involved in the biosynthesis of the macrolide antibiotic nystatin. The nystatin PKS is useful as antifungal antibiotics. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 65140 BP; 8270 A; 25171 C; 22273 G; 9426 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence is a Streptomyces noursei nys1 DNA of nystatin PKS gene cluster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 2; Page 116-151; 266pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New nystatin polyketide synthase polynucleotides and polypeptides, useful as antibiotics and antifungals -
                              AAD17186 standard; DNA; 125401 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122 GCCTGGCGGCGCGCAGAACGGCTTCGTTGATTCCGCCGCCGCGCACATGGGAGCCTTCA 181
                                                                                                                                                                                                                                                                                                                      302 ACGCCGCGCACGTTGGCTCCTACTCTGGGCCGCCCTTCAACTCCACCCGGGACTTCCTGT
                                                                                                                                                                                                                                                                                                                                                                                 242 GCCCCGGCGTACCCCGGCTCCGCTGCGGCTGCCGCTGCGGCCGCAGCGCTCGGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 ATCACCACTCCGCCGCGGCGGCGGCGGCGGCCGCCGAGATGCAGGACCGTGAACTGA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 TGCTCCTGGACGCGGGTCCGCAGTTCCCGGCCATCGGGGTGGGCAGCTTCGCGCGCCACC
                                                                                                                                                                                                GGCCGGGCGGCCGGCCTGCACCACGCGCACTCGGACGCGCAGGGGCCACCTCCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-557614/62
                                                                                                                                                                   TCCGCGCCGGCGACGACGGCCGGCTGCGACCGTCGAGGAACTGACCCTGGCCGCCCCCC
                                                                                                                                                                                                                              CCGACCACGGGGTCCAGGGCCCGGGCCCTGCCGGCCACCGCCTTCGTCGAACTGGCCG
                                                                                                                                                                                                                                                           TCCGCAGCGCGCGCTTCCGGGGGACTTCGGCGCGGGCGGCGGGCAGCACGGGCTGTTCG
                                                                                                                                                                                                                                                                                          AGCTCAACCCGGGCGCGCACGAGCTGTCCCCGGGGCCAGAGCTCGGCGTTCACGTCGCAGG
                                                                                                                                       CGGGCCTGCCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DZIEGLEWSKA H.
ZOTCHEV S B.
SEKUROVA O N.
FJAERVIK E.
BRAUTASET T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAE10125, AAE10126, AAE10127, AAE10128, AAE10129, AAE10130, 1, AAE10132, AAE10133, AAE10134, AAE10135, AAE10136, AAE101:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STROM A R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ellingsen TE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sekurova ON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sletta H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fjaervik E, Brautase
letta H, Gulliksen O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches 274; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 56.6; DB Pred. No. 0.12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Brautaset T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 65140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Strom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
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                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                           19346
                                                                                                                                                                                                                                                                                                                        361
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                                                                                                                                                                     19466
                                                                                                                                                                                                                                19406
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
08-FEB-2000;
10-APR-2000;
14-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
The present invention relates to the cloning cluster encoding a modular type I polyketide
                                                                                                                                                                                                                                                                                                       (UYNO-)
(SNTF)
(ALPH-)
(SINV-)
(DZIE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200159126-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Streptomyces noursei.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Polyketide synthase; antifungal; antibiot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Streptomyces noursei nystatin PKS gene cluster DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-NOV-2001 (first entry)
                                             Claim 1; Page 188-254; 266pp; English.
                                                                                                                       WPI; 2001-557614/62
P-PSDB; AAE10143, A/
AAE10149, AAE10150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-FEB-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-AUG-2001.
                                                                                                                                                                                   Valla
                                                                                                                                                                                                  Zotchev SB,
                                                                                                                                                                                                                                                               (ZOTC/)
(SEKU/)
(FJAE/)
                                                                                                                                                                                                                              (STRO/)
                                                                            nystatin polyketide synthase polynucleotides ful as antibiotics and antifungals -
                                                                                                                                                                                   S
                                                                                                                                                                                                                                                           DZIEGLEWSKA H.
ZOTCHEV S B.
SEKUROVA O N.
FJAERVIK E.
                                                                                                                                                                                                                                STROM A R.
                                                                                                                                                                                                                                                                                                                        ALPHARMA AS.
SINVENT AS.
                                                                                                                                                                                                                                                                                                                                                                    UNIV NORGES TEKNISK NATURVITENSKAPELIGE
                                                                                                                                                                                                                                              BRAUTASET T.
                                                                                                                                                                                 Ellingsen TE,
                                                                                                                                                                                                                                                                                                                                                                                                 ; 2000GB-0002840.
; 2000GB-0008786.
; 2000GB-0009387.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antibiotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-GB00509
                                                                                                                                                                                                   Sekurova
                                                                                                                                                                                                                                                                                                                                                      STIFTELSEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= g
/product= "NysD2 complete protein"
120628.121308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*rag= a
/product= "NysI complete protein"
34792..51099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /nore= "CDS does not include start codon" complement (59045..60241)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= c
/product= "NysK protein"
57503..58687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "CDS does not incl
complement (60238..61296)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product= "NysL protein" complement (58786..58980)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product= "NysJ
51155..57355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product= "NysN protein"
/note= "CDS does not inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product= "NysR4 (long) protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'product= "NysM protein"
                                                                                                                                     AAE10144, AAE10145,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PKS; macrolide; nystatin; PKS gene cluster;
                                                                                                                                                                                                  ON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ds
                                                                                                                                                                                   Sletta H,
                                                                                                                                                                                                                                                                                                                                                        IND TEK FORSK.
                                                                                                                                                                                                  Fjaervik E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein"
                                                                                                                                                                                    Gulliksen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  include start codon"
                                                                                                                                        AAE10146,
                                                                                                                                                                                                   Brautaset
 and sequencing of the synthase (PKS) enzyme
                                                                                                                                                                                    0
                                                                                                                                        AAE10147, AAE10148,
                                                                                            and
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Дb

19107

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Query Match Best Local : Matches

RESULT 11 AAD17186

AAD17186;

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polypeptides

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19347

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RESULT 12
AAA09686
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79308 GCAAGGACCGCCGAGGAGCTCTCCGCCGTCACCGGCCTGGCCCGACGCCCACGTCCGCG 79367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                79728 TGGTGCTGCCCGAGC 79742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79668 TCCGCGCCGGCGACGAGGCCGGCTGCGACCGCGTCGAGGAACTGACCCTGGCCGCCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79608 CCGACCACGGGGTCCAGGGCCGGGCCCTGCTGCCCGGCACCGCCTTCGTCGAACTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              79488 TCACCGCCGCGGGACTGGGCGCCGCCGACCACCCGCTGCTCCGCCCCACCGTCGAACTCG 79547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79428 CCACCTACCCTTCCAGCACCAGCGGTTCTGGCCGACCGCGCCCGCGCCCCCAGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79248 TGCTGTCCGCCATGGCCCAGGAATCCCTGCCGGACGGCGCCGCCGCCGCCGCCGCTGCTGC 79307
   Pala P,
                                  (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                 14-DEC-1993;
                                                                                                13-DEC-1994;
                                                                                                                                                                                                 Herpes simplex virus type
                                                                                                                                                                                                                                  vaccine;
                                                                                                                                                                                                                                              Herpes-simplex-virus type 2;
                                                                                                                                                                                                                                                                               HSV-2 immediate early protein ICP4 DNA sequence.
                                                                                                                                                                                                                                                                                                                  31-JAN-2001
                                                                                                                                                                                                                                                                                                                                                 AAA09686;
                                                                                                                                                                                                                                                                                                                                                                                AAA09686 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 125401 BP; 15664 A; 49692 C; 42871 G; 17174 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              involved in the biosynthesis of the macrolide antibiotic nystatin. The nystatin PKS is useful as antifungal antibiotics. The present sequence is a Streptomyces noursel nystatin PKS gene cluster DNA.
                                                                                                                                 22-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    482 CGGGCCTGCCAGAGC 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               422 GGCCGGGCGCGGCCTGCACCACGCGCACTCGGACGCGCAGGGCCACCTCCTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              182 AGCTCAACCCGGGCGCACGAGCTGTCCCCGGGCCAGAGCTCGGCGTTCACGTCGCAGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362 TCCGCAGCGCGCGCTTCCGGGGACTTCGGCGCCGGGCGGCGGGCAGCACGGGCTGTTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302 ACGCCGCGCACGTTGGCTCCTACTCTGGGCCGCCCTTCAACTCCACCCGGGACTTCCTGT 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242 GCCCCGGCCTACCCCGGCTCCGCTGCCGCCTGCCGCCGCCGCAGCGCTCGGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62 ATCACCACTCCGCCGCGGCGGCGGCGGCGGCGGCCGAGATGCAGGACCGTGAACTGA 121
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                                                                                                                                                                                                                                infection;
Gheysen DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                 93GB-0025496.
                                                                                                94WO-EP04138.
                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                  ds.
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44.6%;
Slaoui MM,
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                                                                                                                                                                                                                                              HSV-2; infected cell
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Pred. No. 0.11;
 Koutsoukos MC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 125401;
                                                                                                                                                                                                                                              protein
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2487
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3957 BP; 368 A; 1656 C; 1568 G; 365 T; 0 other;
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                                                                                                                                                                 Human herpesvirus 2 complete DNA genome.
                                                                                                                                                                                                                                   26-MAR-2002
                                                                                                                                                                                                                                                                                                  AAD25519;
                                                                                                                                                                                                                                                                                                                                                                    AAD25519 standard; DNA; 154746 BP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    474 CCTCTTCCCGGGCC 487
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Local Similarity 45.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCCGCCGAGGGCC
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                                                                                                                                                                                                                                (first entry)
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Pred. No. 0.18;
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Human herpesvirus 2; cytostatic; cancer; immunosuppressive; virucide; antibacterial; fungicide; protozoacide; antirheumatic; antiinflammatory; antiarthritic; rheumatoid arthritis; neuroprotective; multiple sclerosis

response; vasotropic; vaccine; gene

therapy; autoimmune disease;

sclerosis;

vasculitis; ds

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Composition for oral delivery of vaccines, comprises expression containing antigenic genomic sequence, bound to aggregated protein-polycationic polymer conjugate or suspension -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Orson
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-APR-2001; 2001WO-US11372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200176643-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human herpesvirus
                                                                                                                                                                                                                                                                                                                       174
                                                                                                                                                                                                                                                                                                                                                                                                                      114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54 GCGCCACCATCACCACTCCGCCGCGGCGGCGGCGGCGGCTGCCGGAGATGCAGGACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  invention relates to a composition comprising
GGCGCGCAAGCGCCAAGAGCCCCCGCCCGGCCAGGGCGCCCCGGGCGCGCCCCCGCGCCC
                                                                                                                                                                                                                                                             GAGCTCCGCCGCCGCCGCCGCGGGCCTGCTGCTTCCAGAACCAGAGCCTGCGCCCCCT
                                                                                                                                                                                                                                                                                                                                                             CGCCGTGAGCCTGGTCGCCGGGGCCCTGGGCCCGGGCGCTGCCGGGCCTGCT 151955
                                                                                                                                                                                                                                                                                                                                                                                                               TGAACTGAGCCTGGCGGCGCGCAGAACGGCTTCGTTGATTCCGCCGCCGCGCACATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCCCCACGCCGCACGTTGGCTCCTACTCTGGGCCGCCCTTCAACTCCACCCGGGA 353
                                                                                                                                                                   GTCGCAGGGCCCCGCCTACCCCGGCTCCGCTGCGGCTGCCGCTGCGGCCGCAGCGCT
                                                                                                                                                                                                                                                                                                             AGCCTTCAAGCTCAACCCGGGCGCGCACGAGCTGTCCCCGGGCCAGAGCTCGGCGTTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to an aggregated protein-polycationic polymer conjugate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kinsey BM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 90-132; 145pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-195680P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23003 A; 54218 C; 54701 G; 22824 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11.3%;
45.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bhogal BS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 56.4; DI
Pred. No. 0.11;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               an expression vector
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AAD25519/c ID AAD25519 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence operatively linked to a polynucleotide sequence encoding an antigen which is a fragment of a gene or genome associated with an infectious disease, cancer and autoimmune disease such as rheumatoid arthritis, vasculitis, and multiple sclerosis, pathogenic genomes consisting of bacterium, fungus, protozoa and virus such as human immunodeficiency virus (HIV), herpes simplex virus (HSV), hepatitis C virus (HCV), influenza and respiratory syncytial virus (RSV), and optionally comprising a nucleotide sequence encoding a cytokine (or a cytokine expression vector), is useful for inducing an immune response (systemic and/or mucosal) in an organism. The cytokine expression vector
                                                different promoter polynucleotide sequences. The expression vector, DNA vaccine is useful for treating a condition in an organism. The present sequence is human herpesvirus 2 complete DNA genome related
                                                                                                          contains a sequence for granulocyte macrophage-colony stimulating factor (GM-CSF) or interleukin-12 (IL-12). The polynucleotide sequences encoding the antigen and the cytokine are under transcriptional control of same or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Composition for oral delivery of vaccines, comprises expression containing antigenic genomic sequence, bound to aggregated protein-polycationic polymer conjugate or suspension -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human herpesvirus 2; cytostatic; cancer; immunosuppressive; virucide; antibacterial; fungicide; protozoacide; antirheumatic; antiinflammatory; antiarthritic; rheumatoid arthritis; neuroprotective; multiple sclerosis; immune response; vasctropic; vaccine; gene therapy; autoimmune disease; vasculitis; ds.
                                                                                                                                                                                                                                                                                                                                                                bound to an aggregated protein-polycationic polymer conjugate or suspension. The expression vector contains a promoter polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 90-132; 145pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-APR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-APR-2001; 2001WO-US11372.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human herpesvirus 2 complete DNA genome.
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                                                                                                                                                                                                                                                                                                                                                                                              invention relates to a composition comprising an expression vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002-066308/09
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-195680P
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Query Match

Sequence

154746 BP;

23003 A;

54701 G; 22824 T; 0 other;

Score 56.4; 54218 C;

DB 24;

Length 154746;

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RESULT 15
AAI99683/c
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                          AAI99683 standard; DNA; 4403765 BP
                                                       Evaluating strain variation of Mycobacterium tuberculosis, computermining the nucleotide sequence of the strain at positions genome corresponding to positions where M. tuberculosis strains
                                                                                                        WPI;
                                                                                                                                                                                                                                                    US6294328-B1
                                                                                                                                                                                                                                                                           Mycobacterium
                                                                                                                                                                                                                                                                                                                                    Mycobacterium tuberculosis strain H37Rv genome
                                                                                                                                                                                                                                                                                                                                                           15-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                    AAI99683;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  114
                      Claim 4;
                                                                                                                              Fleischmann RD,
                                                                                                                                                                              24-JUN-1998;
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                                                                                                                                                                                                                            25-SEP-2001.
                                                                                                                                                                                                                                                                                                  variation;
                                                                                                                                                                                                                                                                                                            Mycobacterium
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                                                                                                                                                      (GENO-)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54 GCGCCACCATCACCACTCCGCCGCGGCGGCGGCGGCGGCGGCCGAGATGCAGGACCG 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCCGCCGAGGGCC 129473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTCTTCCCGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTCCTGTTCCGCAGCGCGCGCCTTCCGGGGACTTCGGCGCCGGGCGGCAGCACGG 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCGCAGGGCCCCGGCCTACCCCGGCTCCGCTGCCGCTGCCGCCGCAGCGCT 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGCTCCGCCGCCGCCGCCGCCGCGGACCTGCTCTTCCAGAACCAGAGCCTGCGCCCCCT 129727
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCGCCTGCGCGGGGACCTGCGCGTGGCCGGCGGCGGCGAGGCCGCCGTGGCCGTGCG 129847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCCCCCGCCGCCGACGCCGCCGCCGCCGCCGCCGCCGCGCGCGCTGACCCGCCG 129487
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-647261/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        198;
                                                                                                                                                      INST GENOMIC RES.
                      SEQ
                                             H37Rv differ
                                                                                                                                                                                                                                                                                               ium tuberculosis; strain H37Rv; strain CDC 1551; genome;
epidemiology; patient treatment; epidemic monitoring; d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                      IJ
                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                            tuberculosis
                                                                                                                                                                             98US-0103840
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                                                                                                                              White OR,
                     NO 2;
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                     3pp
                     + Sequence
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                                                                                                                               Fraser CM,
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                     Listing; English
                                                                                                                              Venter
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                                                                                                                               JC;
                                                                                                                                                                                                                                                                                                                                     SEQ ID NO
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                                                          strains CDC
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Best Local :
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                                                                                                                                                                                                                                                              3940497
                                                                                                                                                                                                                                                                                                                                                                                                                                         3940617
  3940320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  different populations of the tuberculosis bacterial pathogen, Mycobacterium tuberculosis or related Mycobacterium by determining the nucleotide sequence of the first strain at positions in the complete sequence of the genome that correspond to positions that differ in the nucleotide sequences of M. tuberculosis strains CDC 1551 (AA199683) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4403765 BP; 757105 A; 1447799 C; 1441301 G; 757371 T; 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from USPTO at seqdata.uspto.gov/sequence.html?DocID=6294328B1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 monitoring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  H37Rv (AAI99682). The method is useful for evaluating strain variation of M. tuberculosis and has valuable application in the fields of tuberculosis genetics, epidemiology, patient treatment and epidemic
                                                                                                                               283
                                                                                                                                                                                                                                                                                          163 GCGCACATGGGAGCCTTCAAGCTCAACCCGGGGCGCACGAGCTGTCCCCCGGGCCAGAGC 222
                                                                                                                                                                                                                                                                                                                                                                                             103 ATGCAGGACCGTGAACTGAGCCTGGCGGCGCGCGCAGAACGGCTTCGTTGATTCCGCCGCC 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43 GGCAGCTTCGCGCGACCATCACCACTCCGCCGCGGCGGCGGCGGCGGCGGCTGCCGCCGAG 102
                                         GCCGCAGCGCTCGGGCCCCACGCCGCGCACGTTGGCTCCTACTCTGGGCCGCCCTTCAAC 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               177;
                                                                                                                                                                                                                    TCGGCGTTCACGTCGCAGGGCCCCGGCGCCTACCCCGGCTCCGCTGCGGCTGCCGCTGCG 282
GCCGCCGAGGCCGCCTGTCCGCCAGCGCCCAGCAGCAGTGCGCCGGCGACCGCCGGCGCCC 3940261
                                                                                                                                                                                                                                                                GCCGACACCGGCGTTACCGGCCGCTCCGCTGGCCGCTGAAGAGCTGGCCCGCGGCACCACC 3940438
                                                                                                                                                                                                                                                                                                                                                    CTGGTCGGCGTCGGCCGGCCGCCGGCTCCGCCGTCACCGCCTTGGCCGCCGGCCCCC 3940498
                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCGGCCCCGCCGGCTCCGCCGCCCACCGGCGAACCCGGTGCCGCCGGTGGCGCCGGG 3940558
                                                                                     GGTGGGGTTATCGGCGCCCGGCCCCGC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11.2%;
49.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 56; DB 22
Pred. No. 0.086;
0; Mismatches 1
                                                                                       -CAGCACCCCCATCCCGCCTTGTCCGCCGGC
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Search completed: October Job time : 1424 secs 10, 2002, 14:50:58

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GENERAL INFORMATION:
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Best Local Similarity
Matches 202; Conserv
                                   INFORMATION FOR SEQ ID NO:
                                                                                                                    FILING DATE: 29-NOV-1995
ATTORNEY/AGENT INFORMATION:
NAME: DIGIGIGIO, Frank S.
REGISTRATION NUMBER: 31,3
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: GOODIFOLIOW, PETER AND PROTEIN AND TITLE OF INVENTION: SOX-9 GENE AND PROTEIN AND TITLE OF INVENTION: USE IN THE REGENERATION OF BONE OR CARTILAGE
   SEQUENCE CHARACTERISTICS:
LENGTH: 3923 base pair
                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: FastSEQ Version 1.5 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-4343
                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
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APPLICATION NUMBER: PCT/
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OPERATING SYSTEM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Diskette
                                                                                                                                                                                         UMBER: PCT/AU95/00799
29-NOV-1995
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                                                                                                                                                                                                                                                                                                                                                                                               DOS
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                                                                                                                                                                                                                                           AU PM9835
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                                                                                                                                      31,346
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Pred. No. 7.9e-18;
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                                                                    APPLICATION NUMBER: AU PM9835
APPLICATION NUMBER: AU PM9835
FILING DATE: 05-DEC-1994
APPLICATION NUMBER: PCT/AU95/0(
TYTING DATE: 29-NOV-1995
TYTING DATE: 29-NOV-1995
                                                                                                                                                                                                                                                                  SOFTWARE: FastSEQ Version 1.5
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Koopman, Peter
APPLICANT: Goodfellow, Peter
TITLE OF INVENTION: SOX-9 GENE AND PROTEIN AND
TITLE OF INVENTION: USE IN THE REGENERATION OF BONE OR CARTILAGE
NUMBER OF SEQUENCES: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                 FILING DATE: 29-NOV-1995
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                             PRIOR APPLICATION DATA:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   179 GCGGCGGGGGCCCAAGGCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGG
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nes 202; Conserv
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STRANDEDNESS: sing
               REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 10981
                                                                                                                                                       APPLICATION NUMBER: AU P
                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/860,635A FILING DATE: 29-MAY-1997
                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
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                                                     NAME:
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                                             DiGiglio, Frank S.
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Pred. No. 7.9e-18;
0; Mismatches 101
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Best Local
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TOPOLOGY: line
MOLECULE TYPE: c
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LENGTH: 2249 base pairs
TYPE: nucleic acid
STRANDENESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Koopman, Peter
APPLICANT: Goodfellow, Peter
TITLE OF INVENTION: SOX-9 GENE AND PROTEIN AND
TITLE OF INVENTION: USE IN THE REGENERATION OF BONE OR CARTILAGE
                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/281,476
                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
             FILING DATE: 29-NOV-1995
ATTORNEY/AGENT INFORMATION:
NAME: DiGiglio, Frank S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 2
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TELEFAX: 516-742-4366
                                                                                                                                                                                                                                                   OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 1.5
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CITY: Garden City
STATE: NY
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                                                   APPLICATION NUMBER: AU PM9835
FILING DATE: 05-DEC-1994
APPLICATION NUMBER: PCT/AU95/00799
FILING DATE: 29-NOV-1995
                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
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NUMBER:
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69.2%;
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Pred. No. 2.1e-16;
0; Mismatches 81;
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; MOLECULE TYPE: cDNA US-09-281-476-18
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US/08196016A Patent No. 5596089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 182;
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SEQUENCE CHARACTERISTICS:
LENGTH: 2249 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-4343
TELEFAX: 516-742-4366
                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
COMPUTER: FOR COMPATIBLE
COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CORRENT APPLICATION DATA:
CORRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: SILVERSIDES, David W. APPLICANT: DANEAU, Isabelle M.F. APPLICANT: HOUDE, Alain TITLE OF INVENTION: SRY GENOMIC TITLE OF INVENTION: SEXING
                                                                                                   APPLICATION NUMBER: US/0
FILING DATE: 14-FEB-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: JACKSON, David A.
                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
REGISTRATION NUMBER: 26,742
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEFAX: 201-343-1684
TELEX: 133521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174 CGGCGGCGGCGGGGGCCAAGGCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTT 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  414 CAAGTACCGGCCGCGCGCAAGA 436
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   577 CGTGCGCGTCAACGGCTCCAGCAAGAACAAGCCACACGTCAAGCGACCCATGAACGCCTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 354 GCCGTTCATCGACGAGGCCAAGCGGCTGCGCGCGCTGCACATGAAGGAGCACCCGGATTA 413
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               294 CTCGGAGATCAGCAAGCGCCTGGGGGCCGAGTGGAAGGTCATGTCCGAGGCCGAGAAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          234 CATGGTGGTGCCGGGGGAGGGGGGGGAGAAGATGGCCCAGGAGAACCCCCAAGATGCACAA 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                           STREET: Continent
CITY: Hackensack
STATE: N.J.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                        ZIP: 07601
                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: KLAUBER & JACKSON STREET: Continental Plaza, 411 Hackensack Avenue
                                                                                                 JACKSON, David A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2249 base pairs
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 Mismatches

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Pred. No. 2.1e-16;
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RESULT 6
US-08-196-016A-1
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Best Local Similarity
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APPLICANT: SILVER
INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: DN
                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: KLAUBER & JACKSON
STREET: Continental Plaza, 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: DANEAU, Isabe APPLICANT: HOUDE, Alain
                                                TELECOMMUNICATION INFORMATION: TELEPHONE: 201-487-5800
                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1032 GAGG 1035
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                                                                                                               CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SRY GENOMIC SEQUENCES AND USE IN TISSUE TITLE OF INVENTION: SEXING
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                                                                                                                                                                                                                                                                                            ZIP:
                                                                                 NAME: JACKSON, David A. REGISTRATION NUMBER: 26,742
                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 14-FE
                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHROMOSOME/SEGMENT:
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                  TELEFAX: 201-343-1684
TELEX: 133521
                                                                                                                                                                                                                                                                                                                             STATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SILVERSIDES, David W. DANEAU, Isabelle M.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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                                                                                                                                                  14-FEB-1994
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Pred. No. 3.8e-16;
                                                                                                                                                                                                                                                                                                                                                             411 Hackensack Avenue
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                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Rabin, Daniel
TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS
TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                  COMPUTER: Apple Macintosh
OPERATING SYSTEM: System
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch,
COMPUTER: Apple Macintosh
                                                            APPLICATION NUMBER: US 0 FILING DATE: 14-JUN-1991 PRIOR APPLICATION DATA:
                                                                                                            APPLICATION NUMBER: US 07 FILING DATE: O8-JUN-1992 PRIOR APPLICATION DATA:
                                                                                                                                                              APPLICATION NUMBER: 1
FILING DATE: 05-MAY-
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1294 GAGCCAAGAGGCCACAGAA 1312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1234 AGAGACTACTAGCCATACACCGAGACAAATACCCGGGCTATAAATATCGACCTCGTCGGA 1293
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 1661 base pairs
                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314 TGGGGGCCGAGTGGAAGGTCATGTCCGAGGCCGAGAAAGCGGCCGTTCATCGACGAGGCCA 373
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                                                                                                                                                                                                                                                                                                                                                                                     STREET: 660 WAI CITY: Tarrytown
                               APPLICATION NUMBER: FILING DATE: 04-DEC
                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                      STATE:
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nes 175; Conserv
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STRANDEDNESS: sing
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                         ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                        New York
                                                                                                                                                                                                                                                                                                                                                                                                        E: Sprung Kramer Schaefer & Briscoe 660 White Plains Road
                                                                                                                                                                                                                                                                                                                                                        USA
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                                 04-DEC-1989
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                                                                                                                                                                                                                                                                     System 7.5
                                                 US 07/441,703
                                                                                                 us 07/715,181
                                                                                                                                                   US 07/872,646
US 07/312,543
                                                                                                                                                                                                                   US/08/239,276
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Pred. No. 8e-15;
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                                                                                                                                                                                                                                                                                                        1.4 Mb storage
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 6, Application US/08468579B Patent No. 5981700
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION: APPLICANT: Rabin,
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INFORMATION FOR SEQ ID NO: (SEQUENCE CHARACTERISTICS:
                                                                                 COMPUTER: Apple Macintosh
OPERATING SYSTEM: System 7.
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/4
FILING DATE: 05-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING NUMBER OF SEQUENCES: 19
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ATTORNEY/AGENT INFORMATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/239,276
FILING DATE: 05-MAY-1994
                                                                                                                                                                                                                ZIP: 10591-5144

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
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CITY: Tarrytown
STATE: New York
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STRANDEDNESS: single
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REGISTRATION NUMBER:
                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                        COUNTRY:
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660 White Plains Road
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                                                                                                                                                                     System 7.5
                                                                                                           US/08/468,579B
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (914) 332-1700
TELEFAX: (914) 332-1844
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTER/STICS:
LENGTH: 3243 nucleotides
                                                                                                                                                                                                                                  Sequence 6, Application US/08468577B Patent No. 6001804
GENERAL INFORMATION:
APPLICANT: Rabin, Daniel
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Best Local Similarity
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COMPUTER READABLE FORM:
                                                                                                                                                                    TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING NUMBER OF SEQUENCES: 19
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PRIOR APPLICATION DATA:
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APPLICATION NUMBER: US 07/872,646
                                                                                                                                               CORRESPONDENCE ADDRESS
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TYPE: nucleic acid
STRANDEDNESS: single
                                                           CITY: Tarrytown
STATE: New York
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                                   COUNTRY:
                                                                                                    STREET:
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                     10591-5144
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                                                                                                      E: Sprung Kramer Schaefer & Briscoe 660 White Plains Road
                                          USA
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US-08-239-276-5
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                    Sequence 5, Application US/08239276 Patent No. 5840836 GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 3243 nucleotid
                                                                                                                                                    1190 AGCCGGCAGACCTGGAGAAGTATCCTGACTACAAGTACAAGCCGCGGCCCCAAGCGCA 1247
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    APPLICANT:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (914) 332-1700
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NAME: Kurt G. Briscoe
NAME: Kurt G. Briscoe
NAME: Kurt G. Briscoe
NAME: Kurt G. Briscoe
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PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                          202 CAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGC
                                                                                                                                                                                                                                                                                                                                               262 AAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGGCC 321
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    Rabin, Daniel
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08-JUN-1992
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Best Local :
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (914) 332-1700
TELEPAX: (914) 332-1844
INFORMATION FOR SEQ ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 1570 nucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 0: FILING DATE: 17-FEB-1989 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 0: FILING DATE: O8-JUN-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
COMPUTER: Apple Macintosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
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338 ATCG-TCATCACCTGGAGAAGTATCCTGACTACAAGTACAAGCCGCGGC
                                 382 CGCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGCGCC 430
                                                                           278 CGCTGGAAGTCCATGACCAACCAGGAGAAGCAGCCCTACTATGAGGAACAGGCTCTGCTG
                                                                                               322 GAGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGAGGCCAAGCGGCTG 381
                                                                                                                                                      218 AAGATCCTGCAAGCCTTCCCAGACATGCACCAGCCATCAGCAAGATCCTTGGATCT
                                                                                                                                                                                         262 AAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCC 321
                                                                                                                                                                                                                               158 AGCAGCCACATCAAGAGGCCCATGAACGCCTTCATGGTGTGGGCCAAGGATGAGCGGAGG
                                                                                                                                                                                                                                                                    202 CAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGGTGGTCCCGCGGGCAGCGGCGC
                                                                                                                                                                                                                                                                                                                                           Apple Macintosh
OPERATING SYSTEM: System SOFTWARE: Words
                                                                                                                                                                                                                                                                                                        98 GAGGAAGCCATGCTGAGCTGCGACATGGATGGCTCCCGCCACTTCCCCGAGTCCCGAAAC
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) 332-1844
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                                                                                                                                                                                                                                 Matches 198;
                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
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APPLICANT: Rabin, D
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
TELECHIONE: (914) 332-1700
TELECAR: (914) 332-1844
INFORMATION FOR SEQ ID NO: 5:
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CITY: Tarrytown
CTATE: New York
                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 1570 nucleotic
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APPLICATION NUMBER: US 08/239,276
FILING DATE: 05-MAY-1994
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ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Diskette,
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CORRESPONDENCE ADDRESS:
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158 AGCAGCCACATCAAGAGGCCCCATGAACGCCTTCATGGTGTGGGGCCAAGGATGAGCGGAGG 217
                                    202 CAGGACCGGGTCAAACGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGC 261
                                                                                                            NAME: Kurt G. Briscoe
REGISTRATION NUMBER: 33,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 0 FILING DATE: 08-JUN-1992
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                                                                         98 GAGGAAGCCATGCTGAGCTGCGACATGGATGGCTCCCGCCACTTCCCCGAGTCCCGAAAC 157
                                                                                                                                                   38 ATCAGCCTGGACTCATCCCCAGCCAAGGAGCGGCTGGAGGACGGCTGTGTGCACCCACTG
                                                                                                                                                                                        82 ACCGACCTGCACTCGCCCGGCGGCGCCCAGGCCCCCACGAACCTCTCGGGCCCCGCCGGG 141
                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: sing
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660 White Plains Road
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O6-JUN-1995
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56.78;
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Pred. No. 7.1e-10;
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                                                                      TOPOLOGY: US-08-468-577B-5
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 Matches
                 Query Match
Best Local Similarity
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                                                                                                                                                                            TELEFAX: (914) 332-1844 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: MD TELECOMMUNICATION INFORMATION: TELEPHONE: (914) 332-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING NUMBER OF SEQUENCES: 19
                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 1570 nucleotides
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APPLICATION NUMBER:
FILING DATE: 08-JUN-
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APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 05-MA
                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM:
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                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
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 198;
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5. 6001804
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                                                                                                                                                                                                                                                                                      Kurt G. Briscoe
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660 White Plains Road
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                                                                                                                                                                                                                                                                  33,141
0; Mismatches 150; Indels
                 Score 97; DB 3; Length 1570; Pred. No. 7.1e-10;
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1:
Gaps
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                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 530
PRIOR APPLICATION DATA:
PRIOR NUMBER: US 07/872,646
                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 0 FILING DATE: 14-JUN-1991 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 0 FILING DATE: 08-JUN-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING
                                    SEQUENCE CHARACTERISTICS:
LENGTH: 1397 nucleotides
                                                                                                                                      REGISTRATION NUMBER: 33,141
REFERENCE/DOCKET NUMBER: MDI 251.4-KGB
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                     FILING DATE: 17-FEB-1989 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                            FILING DATE: 04-DEC-1989 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: Apple Macintosh
OPERATING SYSTEM: System
SOFTWARE: WordPerfect
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                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Tarrytown
                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE:
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    STRANDEDNESS:
                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
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                     nucleic acid
                                                                                                                                                                                                  Kurt G. Briscoe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Sprung Kramer Schaefer & Briscoe 660 White Plains Road
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                                                                                                  (914) 332-1844
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                                                                                                                       (914)
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05-MAY-1994
single
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                                                                                                                                                                                                                                                             US 07/312,543
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                    INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS
TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 07/872,646
FILING DATE: 08-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/715,181
                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
FILING DATE: 05-MAY-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
SEQUENCE CHARACTERISTICS:
                                                                        TELECOMMUNICATION INFORMATION:
                                                                                                                                                 FILING DATE: 17-FEB-1989 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                        FILING DATE: 04-DEC-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                              FILING DATE: 14-JUN-1991 PRIOR APPLICATION DATA:
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                                                        TELEPHONE:
                                                                                            REFERENCE/DOCKET NUMBER: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Tarrytown STATE: New York
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                                                                                                                                                                       APPLICATION NUMBER: US 07/312,543 FILING DATE: 17-FEB-1989
                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10591-5144
                                                                                                                                 Kurt G. Briscoe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Sprung Kramer Schaefer & Briscoe 660 White Plains Road
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                                    (914) 332-1844
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04~DEC-1989
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                                                        332-1700
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Pred. No. 1.1e-07;
                                                                                              251.5-KGB
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TYPE: nucleic acid STRANDEDNESS: single TOPOLOGY: linear

LENGTH: 1397 nucleotides

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PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/312,543

FILING DATE: 17-FEB-1989

ATTORNEY/AGENT INFORMATION:

NAME: KURT G. Briscoe

REGISTRATION NUMBER: 33,141

REFERENCE/DOCKET NUMBER: MDI 251.8-KGB

TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
COMPUTER: Apple Macintosh
OPERATING SYSTEM: System 7.5
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Rabin, Daniel
TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS
TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
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APPLICATION NUMBER: US 0
FILING DATE: 05-MAY-1994
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                                                                                                                                                                                                       APPLICATION NUMBER: US 0 FILING DATE: 14-JUN-1991 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/872,646
FILING DATE: 08-JUN-1992
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180 AGAAGTATCCTGACTACAAGTACAAGCCGCGGC 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     398 AGGAGCACCCGGATTACAAGTACCGGCCGCCC 430
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   278 ACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCGAGTGGAAGGTCATGT 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             218 GGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGGGGGGCAAGATGGCCCCAGGAGA 277
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/468,577B FILING DATE: O6-JUN-1995 CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 660 Whit
CITY: Tarrytown
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 TCCCAGACATGCACACTCCAGCATCAGCAAGATCCTTGGATCTCGCTTGGAAGTCCATGA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match 17.0%;
Local Similarity 65.3%;
                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 04-DEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
ZIP: 10591-5144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Sprung Kramer Schaefer & Briscoe 660 White Plains Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                 TUMBER: US 07/441,703
04-DEC-1989
                                                                                                                                                                                                                                                                                                                                                                      US 08/239,276
                                                                                                                                                                                                                                               US 07/715,181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 84.8; DB 2;
Pred. No. 1.1e-07;
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Search completed: October 10, 2002, 17:33:14 Job time: 31.7333 secs
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                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 139; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (914) 332-1844
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 1397 nucleotides
TYPE: nucleic acid
                                                                                                                                                                                                                                398 AGGAGCACCCGGATTACAAGTACCGGCCGCGCC 430
                                                                                                                121 CCAACCAGGAGAANCAGCCCTACTATGAGGAACAGGCTCTGCTGATCG-TCATCACCTGG
                                                                                                                                            278 ACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCGAGTGGAAGGTCATGT 337
                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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AIO94794 gal7f03.x
AIJ94794 gal7f010.x
AIJ71611 wr06al0.x
AIW071909 ws56cl0.x
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BE999816 nac8Bbl2.BE206866 ba04909.y
BI917204 603181352
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BE792833 601584834
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BE79259 601589105
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AA94375101 UI-R-E0-c
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AI1145897 UI-R-BT0-AI145897 ``
Title:
Perfect score:
Sequence:
  Result
No.
  OM nucleic
  Scoring table:
  Database
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   Total number of hits satisfying chosen parameters:
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   on ::
    pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being predicted by analysis of the total score distribution.
  DB
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  280.8
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AI096977
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Compugen Ltd
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  REFERENCE
   DEFINITION
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  AUTHORS
TITLE
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MEDLINE
   source
   BE119829 467 bp mRNA
UI-R-CAO-ban-e-05-0-UI.sl UI-R-CAO Rattus
UJ-R-CAO-ban-e-05-0-UI 3', mRNA sequence.
BE119829
BE119829.1 GI:8511934
EST.
   Contact: Soares, MB

Program for Rat Gene Discovery and Mapping

University of Iowa

451 Eckstein Medical Research Building Iowa City, IA 52242, USA

721: 319 335 8250

Fax: 319 335 9565

Email: msoares@blue.weeg.uiowa.edu

Oligo-dT track not found, Not I site shown in beginning of sequence
is likely internal to the message. cDNA Library Preparation: M.B.

Soares Lab Clone distribution: clones will be available through

Research Genetics (www.resgen.com) The following repetitive
elements were found in this cDNA sequence: 76-194, >(CGG
  Norway rat.
Rattus norvegicus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; l
Mammalia; Eutheria; Rođentia; Sciurognathi; Muridae;
   )n#Simple_repeat
Seq primer: M13
POLYA=No.
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   Genome Res. 6 (9), 791-806 (1996)
   discovery
  Normalization and subtraction:
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  Rattus
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861
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AI102567
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AA924900
  ALIGNMENTS
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norvegicus cDNA clone

EST 13-JUN-2000

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facilitate

Euteleostomi;
; Murinae;

ORIGIN

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REFERENCE
AUTHORS
TITLE
JOURNAL
   FEATURES
  VERSION
KEYWORDS
  DEFINITION
   BF305922
   ACCESSION
   BASE COUNT
  ORGANISM
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   Matches
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  227
  261 CAAGATGGCCCAGGAGAACCCCAAGATGCACACTCGGAGATCAGCAAGCGCCTGGGGGGC 320
  201 CCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGGGGGCAGCGGCG 260
   Local Similarity
   GACGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGGGCTGCTGGCGGCCGGAGCAGG
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   CCAGGATCGGGTCAAGCGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGACAGCGGCG 408
  288;
   Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
  CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: image.llnl. Plate: LLCM1007 row: 1 column: 02
  NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 739)
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  EST
   BF305922.1 GI:11252955
  mRNA sequence.
   601889206F1 NIH_MGC_17 Homo sapiens
   BF305922
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/lab_host="DHIOB (Life Technologies)"
/note="Vector: pTT3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; The UI-R-CAO library is a subtracted library derived from the following tissues: thalamus, cerebellum, hypothalamus, medulla, pons midbrain, cerebral cortex, corpus striatum, testis, and hippocampus. For a detailed description of the library from which this clone was derived, please visit our web from which this clone was derived, please visit our web the library minus description of the library from which this clone was derived, please visit our web the library minus description of the library from which this clone was derived, please visit our web the library minus description of the library minus description and Soares,
  quality sequence stop: 677
   51
  Conservative
/clone="IMAGE:4123153"
/clone_lib="NIH_MGC_17"
  /organism="Homo sapiens"
/db_xref="taxon:9606"
  Location/Qualifiers
  TAG_SEQ=None found"
  Genome Research 6:791-806, 1996)
   56.2%;
96.0%;
  0,
  Score 280.8; DB 9
Pred. No. 1.6e-28;
   739 bp
  Mismatches
  g
  86 t
  mRNA line
s cDNA clone
   DB 9;
   12;
   Indels
   Length 467;
  EST 21-NOV-2000
IMAGE:4123153 5',
   0,
   Gaps
  380
  168
  440
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  228
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  348
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LOCUS

COMMENT

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VERSION
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  Qy
   В
   KEYWORDS
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  JOURNAL
   Query Match
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  COUNT
  332
   212 TGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGA
  325 TGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGACGAGGCCAAGCGGCTGCGC
  205 GACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTTCCCGCGGGCAGCGGCAGCGAAG 264
   92
   32 GGGGGGCGGCGGCAACTCCACCGCGGCGGCGGCGGCGGCAACCAGAAAAAACAGCCCG
  Local Similarity
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  TCATGAAGAAGGATAAGTACACGCTGCCGGCGGCTGCTGGCCCCCGGCG
   GCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGCCGCCGCAAGACCCAAGACG 444
   GCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAAACCAAGACG
   ATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCGAG
   GACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGGCAGCGGCGCAAG
                        Bonaldo, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be consortium/LLNL at:
Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 965)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

NATIONAL CRAP TISTITUTE / NATIONAL Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index
  Unpublished (1998)
  965 bp mRNA linear EST 15-FEB-1999 qy22a10.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2012730 3' similar to gb:X71136 SOX-10 PROTEIN (HUMAN);, mRNA sequence.
   EST
  Tissue Procurement:
   Homo sapiens
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AI356682.1
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  160
  Conservative
  ø
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Site_2: XhoI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the prime of the constructed by clowing 5' adaptor: GGCAGGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)."
a 231 c 249 g 99 t
   53.1%;
84.7%;
  David N. Louis, M.D.,
  0;
   Pred. No.
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   1.6e-26;
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   91
   204
   151
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  0;
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   FEATURES
  COMMENT
   DEFINITION
   REFERENCE
  KEYWORDS
   VERSION
   ACCESSION
   Locus
  AUTHORS
TITLE
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   Query Match
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  source
   383
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  151
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   GCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGCGCGCCGCAAGACCAAGA 442
   AGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGACGACGACGCTAAGCCGCTGC
   AGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCG 322
   CGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA 210
  AGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGCCCGCGGGCAGCGGCGCA 262
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 443)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index Unpublished (1998)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D., Ph.D.
  443 bp mRNA linear EST 16-FEB-199 qz02q05.xl NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2020376 3' similar to qb:X71136 SOX-10 PROTEIN (HUMAN);contains MER22.tl TAR1 repetitive element;, mRNA sequence.
  High
  EST
  Homo sapiens
   AI373018.1 GI:4152884
   Similarity
   quality sequence stop: 480.
Location/Qualifiers
  Conservative
  T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI Sites of the modified pT7T3 vector. Library is normalized, and was constructed by Bento Soares and M.Fatima Bonaldo."

a 329 c 308 g 125 t 1 others
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   Score 265.4;
Pred. No. 1.7
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  1.7e-26;
hes 56;
  DB
   9
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   Length 965;
                  R. Rosenfeld M.D.,
  0;
  Gaps
   330
  382
  270
  0;
  RESULT 5
AI052267
  Qy
   Q
   В
  QΥ
   망
  δÃ
  В
   Qy
  밁
   Дb
  망
   δÃ
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  ACCESSION
   ORIGIN
  BASE COUNT
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  DEFINITION
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   EST
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203 AGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA 262
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  126 CGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA
  66 CGGGGGGCGGCGGCAACTCCACCGCGGCGGCGGCGGCCAACCAGAAAAAACAGCC 125
   CGCTCATGAAGAAGAATAAGTACACGCTGCCCGGCGGCTGCTGCTCCCCCGGCG
   AGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGC
  AGTGGAAGGTCATGTCCGAGGCCGAGACAGCCGGCGGTTCATCGACGAGGCCAAGCCGCTGC
   AGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCG
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  450 bp mRNA linear EST 24-SEP-1998 oy58e06.xl NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:1670050 3' slmilar to gb:X71136 SOX-10 PROTEIN (HUMAN); contains MER22.tl TAR1 repetitive element; mRNA sequence.
  CDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 1163 Std Error: 0.00
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 450)
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   High quality sequence stop: 429.
   Bonaldo, Ph.D.
   Homo sapiens
  Seq primer: -40UP from Gibco
   Similarity
   cDNA Library Preparation: M. Bento Soares, Ph.D.,
  Conservative
  adaptors (Pharmacia), digested with Not I the Not I and Eco RI sites of the modified Library is normalized, and was constructed Soares and M.Fatima Bonaldo."

135 c 154 g 49 t 1 others
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   GI:3308258
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   Score 264.4;
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  DB 9;
   the modified pT7T3 vector. constructed by Bento
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  Indels
  M. Fatima
   419
  0;
  Gaps
  322
  185
  305
  245
   0;
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```
RESULT 6
AI631443
LOCUS
  δÃ
  DЬ
  ρy
  멍
  20
   밁
   ρy
   В
  ρy
  В
   δÃ
  COMMENT
  ORIGIN
   FEATURES
                 DEFINITION
   BASE COUNT
   AUTHORS
TITLE
   Query Match
   Matches
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  143
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   373
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A1631443
452 bp mRNA linear EST 16-DEC-1999 wa89a09.xl NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2303320 3' similar to gb:X71136 SOX-10 PROTEIN (HUMAN); contains MER22.tl TAR1
  Disorders and Stroke, Brain Tum
(CGAP/BTGAP), Tumor Gene Index
Unpublished (1998)
  Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
  NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological
Disorders and Stroke, Brain Tumor Genome Anatomy Project
  Tissue Procurement: David N. Louis, M.D., Myrna R.
  cDNA Library Preparation: M. Bento Soares, Ph.D.,
   104
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  M. Fatima
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   Gaps
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  132
  372
  312
  322
   252
  0;
   γQ
  REFERENCE
AUTHORS
  KEYWORDS
SOURCE
                        ρy
   DЬ
   Qy
  뫄
  Qy
  밁
   δÃ
  Dр
  밁
  Вþ
  QΥ
   ORIGIN
   FEATURES
  COMMENT
   BASE COUNT
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Best Local
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  366
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  AGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA
  CGGGGGGGCGGCGGCAACTCCACCGCGGCGGCGGCGGCGGCAACCAGAAAAAACAGCC 125
  Bonaldo, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
   Tumor Gene Index
Unpublished (1997)
  repetitive element ;, mRNA sequence. AI631443
  Seq primer:
   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 452)
   Homo sapiens
  Email: ggapbs-remail.nih.gov
Tissue Procurement: Christopher A. Moskaluk, M.D.,
R. Emmert-Buck, M.D., Ph.D.
   Contact: Robert Strausberg, Ph.D.
  AI631443.1 GI:4682773
  National Cancer Institute,
   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  cDNA Library Preparation: M. Bento Soares, Ph.D.,
   103
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  /note="Vector: p7773D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Plasmid DNA from the normalized library NCI_CGAP_GC4 was prepared, and so circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified CDNAs from a pool of 5,000 clones made from the same library (cloneIDs 1257096-1258631, 146964-1470983, and 147592-1476743). Subtraction by Bento Soares and M. Fatima Bonaldo. " a 138 c 160 g 51 t
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   DB 9;
   Length 452;
   M. Fatima
  Ph.D., Michael
419
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   Gaps
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В

366

CGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCTGCTGGCCCCCCGGCG 419

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REFERENCE
AUTHORS
  RESULT 7
AI292258
  Q
  ДЬ
   Q
   Вb
  Q
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  В
  Ş
   밁
  망
   δÃ
   FEATURES
  COMMENT
  DEFINITION
  KEYWORDS
  BASE COUNT
   VERSION
  ACCESSION
  Focus
   TITLE
   ORGANISM
   Query Match
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   443
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   GCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGCGCGCAAGACCAAGA 442
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   298;
   qm76c01.x1 Soares_placenta_8to9weeks_2NbHP8to9W Homo sapiens cDNA
clone IMAGE:1894656 3' similar to gb:X71136 SOX-10 PROTEIN (HUMAN
);contains MER22.tl TAR1 repetitive element ;, mRNA sequence.
  Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 1171 Std Error: 0.00
  NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anat
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 460)
   Contact: Robert Strausberg, Ph.D.
  Unpublished (1997)
   Tumor Gene Index
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   Similarity
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/note="Organ: placenta; Vector: pT773D (Pharmacia) with a
/note="organ: placenta; Vector: pT773D (Pharmacia) primer
/note="organ: placenta; Vector: pT773D (Pharmacia) primer
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/note="organ: placenta; Vector: pT773D (Pharmacia) primer
/note="organ: placenta; Vector: pT773D (Pharmacia), digested with Not I and cloned into
the Not I and Eco RI sites of a modified pT773 vector
(Pharmacia), Library constructed by Bento Soares and
M.Fatima Bonaldo."

104 a 140 c 165 g 51 t
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  /organism="Homo sapiens"
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0; Mismatches 56;
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RESULT 8
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  COMMENT
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  ₽
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ORGANISM
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  DEFINITION
  BASE COUNT
  VERSION
  ACCESSION
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  Matches
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  AUTHORS
  203 AGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA 262
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  263 AGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCG
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  66 CGGGGGGCGGCGGCAACTCCACCGCGGCGGCGGCGGCGGCAACCAGAAAAAACAGCC
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  298;
  Bonaldo, Ph.D. CDNA Library Arrayed by: Greg Lennon, Ph.D. CDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/image.html
  1 (bases 1 to 460)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index

Unpublished (1998)
  AW005368 460 bp mRNA linear EST 20-OCT-2000 wz85h12.xl NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2565671 3'similar to gb:X71136 SOX-10 PROTEIN (HUMAN);, mRNA sequence.
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
  Homo sapiens
  EST
  lissue Procurement: David N. Louis,
  Contact: Robert Strausberg, Ph.D.
  AW005368.1 GI:5854146
  Similarity
  cDNA Library Preparation: M. Bento Soares, Ph.D.,
  primer: -40UP from Gibco
  104
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  cgapbs-r@mail.nih
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  Location/Qualifiers
  /organism="Homo sapiens"
52.9%;
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  Score 264.4; DB 9
Pred. No. 2.3e-26;
  Mismatches
  M.D., Myrna R. Rosenfeld M.D.,
  DB 9;
  56;
  Length
  Indels
  information
  Sequencing Center
  M. Fatima
  0;
  Gaps
  185
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  245
  322
  125
  can
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0

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JOURNAL
COMMENT
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AI199308
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  TITLE
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  383 GCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGCGCGCCAAGACCAAGA 442
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  CGCTCATGAAGAAGATAAGTACACGCTGCCCGGCGGCGGCTGCTGCCCCGGCG 419
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1 (bases 1 to 463)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index Unpublished (1998)
Contact: Robert Strausberg, Ph.D.
  463 bp mRNA linear EST 01-DEC-1998 gi41al0.xl NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1859034 3' similar to gb:X71136 SOX-10 PROTEIN (HUMAN);contains MER22.tl TAR1 repetitive element; mRNA sequence.
  CDNA Library Arrayed by: Greg Lennon, Ph.D.

CDNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:

www-bio.llnl.gov/bbrp/image/image.html
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   Homo sapiens
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   Similarity
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  human
   cDNA Library Preparation: M. Bento Soares, Ph.D.,
   primer: -40UP from Gibco
h quality sequence stop: 455.
   104
  Conservative
  cgapbs-r@mail.nih.gov
   þ
  adaptors (Pharmacia), digested with Not I the Not I and Eco RI sites of the modified Library is normalized, and was constructed
  Soares and M.Fatima Bonaldo.
  Ph.D.
   /db_xref="taxon:9606"
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   52.9%;
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0; Mismatches
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  DB 9;
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  0;
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  365
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AI096977
   Ωy
                  ORIGIN
                                  BASE COUNT
  FEATURES
   COMMENT
  Ş
  망
   Qy
   DЬ
   Š
   В
  REFERENCE
  밁
   Дb
  SOURCE
   DEFINITION
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  AGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCG
   CDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center

Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:

www-bio.llnl.gov/bbr/image/image.html
   National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index
   Thear EST 26-OCT-1998 gb42cl2.xl NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:1702774 3′ similar to gb:X71136 SOX-10 PROTEIN (HUMAN); contains MER22.tl TAR1 repetitive element; mRNA sequence.
   Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
  Unpublished (1998)
   1 (bases 1 to 465)
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
   Insert Length: 1141 Std Error: 0.00
Seq primer: -40ml3 fwd. ET from Amersham
High quality sequence stop: 463.
Location/Qualifiers
  Homo sapiens
   Tissue Procurement: David N. Louis, M.D., Myrna R.
  AI096977.1
  Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
  cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
   104
T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and clor the Not I and Eco RI sites of the modified pT7T3 v Library is normalized, and was constructed by Bent Soares and M.Fatima Bonaldo."
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/clone="IMAGE:1702774"
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  Ph.D
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  the modified pT7T3 vector.
  I and cloned into
  Rosenfeld M.D.,
   390
   330
   382
   210
```

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   RESULT 1:
AI146367
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  밁
  QΥ
  Вp
  뮹
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SOURCE
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  COMMENT
   REFERENCE
   VERSION
   ACCESSION
   DEFINITION
  Locus
  FEATURES
   Matches
  Query Match
Best Local
   TITLE
   ORGANISM
  JOURNAL
  AUTHORS
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  186
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   298;
  AI146367
AI146367.1
EST.
   AII46367 465 bp mRNA linear EST 26-OCT-1998 qb41g11.xl NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:1702724 3' similar to gb:X71136 SOX-10 PROTEIN (HUMAN); contains MER22.tl TAR1 repetitive element; mRNA sequence.
  Similarity
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 465)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index
  Unpublished (1998)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
   Homo sapiens
   CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 1157 Std Error: 0.00
  Bonaldo, Ph.D.
  Tissue Procurement: David N. Louis,
  numan
  Insert Length:
   cDNA Library Preparation: M. Bento Soares, Ph.D.,
  primer: -40ml3 fwd. ET from Amersham
h quality sequence stop: 462.
  Conservative
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/note="Organ: brain; Vector: pT7T3D-Pac (Pharmacia) with a
modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st
strand cDNA was primed with a Not I - oligo(dT) primer [5'
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   GI:3674049
  52.9%;
84.2%;
   0;
  Score 264.4; DB 9;
Pred. No. 2.3e-26;
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  M.D., Myrna R.
  56;
   Length
  Indels
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  465;
   information
  M. Fatima
  Rosenfeld
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  Gaps
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  125
  365
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  382
   245
   322
   can
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D.,
   0;
  REFERENCE
AUTHORS
TITLE
  RESULT 12
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   Qy
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  ORIGIN
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  KEYWORDS
   VERSION
  ACCESSION
   DEFINITION
  FOCUS
   FEATURES
   Matches
   Query Match
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  EST
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   ## 478 bp mrNA UI-H-BW1-amj-d-03-0-UI.sl NCI_CGAP_Sub7 IMAGE:3070109 3', mRNA sequence.
   IMAGE: 3070109
BF513177
   Email: cgapbs-r@mail.nih.gov
Oligo-dT track not found, Not I site shown in beginning of seque
is likely internal to the message. cDNA Library Preparation: M.B.
Soares Lab Clone distribution: NCI-CGAP clone distribution
Information can be found through the I.M.A.G.E. Consortium/LLNL
www-bio.llnl.gov/bbrp/image/image.html The following repetitive
elements were found in this cDNA sequence: 1-37,
>GC_rich#Low_complexity 90-133, >GC_rich#Low_complexity
   Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
   Homo sapiens
   BF513177.1
   Similarity
   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 478)
  NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
National Cancer Institute, Cancer Genome Ana
   104
  primer: M13
  Conservative
   T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized, and was constructed by Bento Soares and M.Fatina Bonaldo."

143 c 164 g 51 t 3 others
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   Location/Qualifiers
   52.9%;
84.2%;
  0;
  Score 264.4; DB 9;
Pred. No. 2.3e-26;
0; Mismatches 56;
   Cancer Genome Anatomy Project (CGAP),
  Homo sapiens
  Hominidae;
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   Euteleostomi;
   EST 07-DEC-2000
  0;
  419
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  Gaps
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  245
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/lab\_host="DH10B (Life Technologies)"

Sub7

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  203 AGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGCTCCCGCGGGCAGCGGCGCA 262
   90 CGGGGGGGGGGGCAACTCCACCGCGGGGGGGGCGGCGGCAACCAGAAAAAAACAGCC 149
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  CGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCGGCTGCTGGCCCCCCGGCG 443
   GAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACCAAGA
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   AGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCC
   298;
qa06b04.xl NCI_CGAP_Brn23 Homo sapiens cDNA linear EST 23-OCT-1998 similar to gb:X71136 SOX-10 PROTEIN (HUMAN); contains MER22.tl TAR1 repetitive element; mRNA sequence.
   Similarity
   104
  single-stranded DNA preparation of NCL_CGAP_Subb was used as a tracer in a subtractive hybridization with a driver comprising: the IMAGE pool (NCI_CGAP_Kid3 pool 1 LLAM 334-3337, 3682-3683, 3798-3803 (IMAGE CloneIDs 1122376-1323911, 1456008-1456775,1500552-1502855); NCI_CGAP_Kid5 pool 1 LLAM 3338-3342,3722-3725, 3776-3778 (IMAGE CloneIDs 133912-132531), 1473136-1472903, 1492104-1493255); NCI_CGAP_LU5 pool 1 LLAM 3357-3582, 3851-3854 (IMAGE CloneIDs 11257096-1258631,1469064-147098); NCI_CGAP_CGAP_DOOL 1 LLAM 3164-3167, 3716-3720, 3733-3735 (IMAGE CloneIDs 1257096-1258631,1469064-147098), 1475592-1476743); NCI_CGAP_DOOL 1 LLAM 257-2459, 1475592-1476743); NCI_CGAP_PCP2 pool 1 LLAM 257-2459, 1475592-1476743); NCI_CGAP_PCP2 pool 1 LLAM 257-2459, 1101192-1101959, 1217928-1220615); NCI_CGAP_COL0 pool 1 LLAM 2644-2663, 2871-2872 (IMAGE CloneIDs 1057416-1061255, 11044584-1145351). (6% of the driver population), plus a pool of 3,840 arrayed clones from NCI_CGAP_Sub3 (IMAGE CloneIDs 2708616-2710555) and NCI_CGAP_Sub3 (IMAGE CloneIDs 2708616-2710555) and NCI_CGAP_Sub3 (IMAGE CloneIDs 270266-2712455) (4% of the driver population), plus a pool of 11,136 clones from NCI_CGAP_Sub4 (IMAGE CloneIDs 2702592-2729326) (40% of the driver population), plus a pool of 4032 clones from NCI_CGAP_Sub4 (IMAGE CloneIDs 2702592-2729326) (40% of the driver population), subtraction was performed as previously described [Bonaldo, Two Approaches To Facilitate Gene Discovery. Genome Research 6, 791-806.

TAG_SEQ-None found" 50 t
  Conservative
  /note="Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; NCI_CGAP_Sub7 is a subtracted library derived from NCI_CGAP_Sub6. The NCI_CGAP_Sub7 library had 12 million recombinants. A single-stranded DNA preparation of NCI_CGAP_Sub6 was used single-stranded DNA preparation of NCI_CGAP_Sub6 was used to the proper of NCI_CGAP_Sub6
   52.9%;
  0;
   Score 264.4; DB 10;
Pred. No. 2.3e-26;
  Mismatches
  9
   50 t
  56;
  Indels
  Length 478;
  0;
  Gaps
   382
   329
  269
   322
  209
  0
  20
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  Q
   밁
   밁
   Qy
  ДЪ
  δÃ
  SOURCE
  В
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Q

Matches

Local

BASE COUNT

RESULT 13 AI146406

390

DEFINITION

ACCESSION

В Q В 8 В Qy 밁 Qy В

270

210

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VERSION
KEYWORDS
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  Query Match
Best Local Similarity
   TITLE
  ORGANISM
   JOURNAL
   AUTHORS
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   91
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CGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGGCTGCTGGCCCCCGGCG 444
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  seq primer: -40m13 fwd. ET from Amersham
High quality sequence stop: 456.
   Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
  National Cancer Institute / National Institute of Neurol-
Disorders and Stroke, Brain Tumor Genome Anatomy Project
(CGAP/BTGAP), Tumor Gene Index
   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 480)
NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
   Bonaldo, Ph.D
   Unpublished (1998)
  Homo sapiens
   AI146406.1 GI:3674088
EST.
   cDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
   Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
  cDNA Library Preparation: M. Bento Soares, Ph.D.,
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   2 others
   Length 480;
   Neurological
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   Gaps
   382
   390
   322
   270
  0
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  BASE COUNT
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   AGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGGCCG 322
  AGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGCTCCCGCGGGCAGCGGCGCA 262
  CGGGGGGGGGGCGGCAACTCCACCGCGGCGGCGGCGGCAACCAGAAAAAACAGCC 150
  Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 483)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index (CGAP/BTGAP), Tumor Gene Index (Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index
  TEST 30-MAR-1999 THE ST 30-MAR-1999 THE ST 10-MAR-1999 THE ST 10-MAR-1
   High quality sequence stop: 480.
Location/Qualifiers
1. 483
  CDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Clone distribution: NCI-CGAP clone distribution found through the I.M.A.G.E. Consortium/LLNL at:
  www-bio.llnl.gov/bbrp/image/image.html
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  A1421743.1 GI:4267674
   domo sapiens
   Similarity
   cDNA Library Preparation: M. Bento Soares, Ph.D.,
  104
   Conservative
   Ph.D.
  adaptors (Pharmacia), digested with Not I the Not I and Eco RI sites of the modified Library is normalized, and was constructed Soares and M.Fatima Bonaldo."

152 c 175 g 51 t 1 others
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  Sequencing Center information can be
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KEYWORDS
SOURCE
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   ₽
   ORIGIN
  FEATURES
   REFERENCE
   BASE COUNT
   DEFINITION
   VERSION
   ACCESSION
   CUS
  TITLE
  Query Match
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  ORGANISM
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Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 485)
1 (bases 1 to 485)
MCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological
Disorders and Stroke, Brain Tumor Genome Anatomy Project
(CGAP/BTGAP), Tumor Gene Index
  AW028031 A85 bp mRNA linear EST 08-MAR-2000 ws63801.x1 NCI_CGAP_Brn23 Home sapiens cDNA clone IMAGE:2501832 3' similar to gb:X71136 SOX-10 PROTEIN (HUMAN); mRNA sequence.
   CDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
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EST.
  Bonaldo,
  Contact: Robert Strausberg, Ph.D.
   Unpublished (1998)
  Similarity
   Seq primer: -40UP from Gibco
   Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
  cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
   109
   quality sequence stop: 456.
  Conservative
  cgapbs-r@mail.nih.gov
  T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI Sites of the modified pT7T3 vector. Library is normalized, and was constructed by Bento Soares and M.Fatima Bonaldo."

145 c 176 g 54 t l others
  Ph.D
   /db_xref="taxon:9606"
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            987654WN
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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   SUMMARIES
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Mouse Sox1 cDNA.
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|-----------------------------------------------------|--------------|----------------|-----------|--------------|---------------------------------------------------------------------|------------|----------------------------------------------------------|-----------------------------------------------------------|-------------------------|-----------|---------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------|
| (LUDW<br>(SLOK<br>(CORR                             | 21-          | 19-            | 26-       | MO           | Key<br>CDS                                                          | Homo       | Hun<br>mel<br>lei                                        | Hun                                                       | 24-                     |           | SUL                       |            | 11111111111111111111111111111111111111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10                                                          |      |
| ئات                                                 | 21-JAN-2000; | -JAN-2001;     | -JUL-2001 | WO200153349- | 67.7                                                                | no sapiens | Human; small c<br>melanoma; canc<br>leimyosarcoma;       | Human small                                               | 24-SEP-2001             | AAD11111; | T 1<br>111<br>AAD11111 st |            | 1 1222800 1 1 1 1 1 1 1 2 2 2 2 3 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 6 7 8 7 8                                                                                                                                                                                                                                                | 264.4                                                       |      |
| LUDWIG INST<br>SLOAN KETTE<br>CORNELL RES           | ; 2000US     |                | •         | A2.          | 610<br>/*                                                           | s.         | el<br>er                                                 | cell                                                      | (first                  |           | standard;                 |            | 00000000000000000000000000000000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 52.9                                                        |      |
| INST CANCER RI<br>KETTERING INST<br>L RES FOUND INC | IS-0489101   | 2001WO-US02015 |           |              | Location/C<br>611224<br>/*tag= a<br>/product=                       |            | ~· Q                                                     | lung c<br>colon;<br>novial                                | lung<br>colon<br>novial | t entry)  |                           | DNA;       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2020<br>2020<br>2020<br>2020<br>2020<br>2020<br>2020<br>202 | 1501 |
| ER RES                                              | 101.         | 015.           |           |              | √Qua<br>a<br>a"H                                                    |            | cancer;<br>breas<br>sarcom                               | lung cancer                                               | \ <u>Y</u>              |           | 4091                      |            | 22022334447231232324447233323444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333444723333447474747                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 22                                                          |      |
| RES.<br>ST CANCER RES.<br>INC.                      |              |                |           |              | Location/Qualifiers 61.1224 /*tag= a /product= "Human SOX1 protein" |            | therapy; hCAAP<br>t; head; neck;<br>a; cytostatic;       | associated gene,<br>r; therapy; hCAAP<br>ast; head; neck; |                         |           | BP.                       | ALIGNMENTS | ABIT99318 AAAD11118 AAAB11119 AAAS8738 AAAD11119 AAAS61666 AAAS61666 AAAS8779 AAAS8779 AAAS8779 AAAS8779 AAAS87736 AAF120309 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680 AAAC20680                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | AAK53372                                                    |      |
|                                                     |              |                |           |              |                                                                     |            | ; nucleic acid; NA:<br>transitional cancer;<br>SOX1; ds. | <b>1.</b>                                                 |                         |           |                           |            | Mouse ischaemic con Human small cell lank encoding novel Lung small cell cal Lung small cell cal Lung small cell cal Lung small cell cal Lung small cell cal Lung small cell cal Lung small cell cal Lung small cell cal Lung small cell cal Company small cell cal Lung small cell cal Company con control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the | Human polynucleoti                                          |      |

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  The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a small cell lung cancer associated gene designated as NY-SCLC-2, encoding human SOX1 protein.
  Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded isolated nucleic acid comprising an NA Group 3 or 4 molecule \cdot
                  AAX16151 standard; cDNA to mRNA; 1542 BP
  Sequence 4091 BP; 924 A; 1109 C; 1110 G; 943 T; 5 other;
  Claim 57; Page 88-90; 152pp; English.
   Stockert E,
   481
   481
   421
   361
   361
   301
   421
   301
   181
   241
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   121
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   Local
   1 CCGGCCGTCTATGCTCCAGGCCCTCTCCCTCGCGGTGCCGGTGAACCCGCCAGCCGCCAGCCCCCG 60
  CTCCTGGCGGCCGCGCGGG 500
  CGGCCGCCGCAAGACCAAGACGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGGG 480
   ATCAGCAAGCGCCTGGGGGCCGAGTGGGAAGGTCATGTCCGAGGCCGAGAAAGCGGCCGTTC
  GCCGGGGGCCCAAGGCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTG
  CTCCTGGCGGCCGGCGGG 500
   CGGCCGCCGCAAGACCAAGACGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGGG
   ATCGACGAGGCCAAGCGGCTGCGCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTAC
   ATCGACGAGGCCAAGCGGCTGCGCGCCTGCACATGAAGGAGCACCCGGATTACAAGTAC
  ATCAGCAAGCGCCTGGGGGCCGAGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTC 360
  TGGTCCCGCGGGCAGCGCGCAAGATGGCCCCAGGAGAACCCCCAAGATGCACAACTCGGAG
  TGGTCCCGCGGGCAGCGCCAAGATGGCCCCAGGAGAACCCCAAGATGCACAACTCGGAG
  GGCGGGGGCGCCAAGGCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTG 240
  ATGTACAGCATGATGATGGAGACCGACCTGCACTCGCCCGGCGCGCCCCAGGCCCCCACG 120
  CCGGCCGTCTATGCTCCAGGCCCTCTCCTCGCGGTGCCGGTGAACCCGCCAGCCGCCCG 60
   2001-457597/49.
  500;
   Similarity
  Conservative
   Scanlan
   100.0%;
   Ĭ,
   Jager D,
  0;
   Score 500; DB 22;
Pred. No. 9.6e-70;
  Mismatches
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   Gure AO,
  Length 4091;
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  Gaps
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   480
   360
  240
  0;
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   population. The method comprises: (a) detecting Sox1 gene expression in the cells; and (b) isolating those cells expressing Sox1. Also described is a method for producing a cell committed to the neuronal lineage, comprising: (a) transfecting a pluripotent stem cell with a genetic construct encoding Sox1 expression; (b) culturing the stem cells to differentiate into neural cells; and (c) isolating those neural cells produced. The present sequence encodes human Sox1. Detection of Sox1 expressing cells is important in diagnosing and treating cancers of the neurological disorders, especially for repair of accidentally induced trauma in the CNS or for correction of congenital or pathological diseases of the CNS. A patient with a neurological disorder can act as self-donor. Cells may be isolated from the patient and either sorted to extract neuroblasts, or treated in order to differentiate neuroblasts,
  Sequence 1542 BP; 238 A; 565 C; 560 G; 179 T; 0 other;
  A method has been developed for isolating neuroblastic cells from a cell
  Claim 13; Page 45-47; 60pp; English.
   Isolating neuroblastic cells from a population - by detecting the expression of the Sox1 gene in the cells and sorting the cells to isolate those cells expressing Sox1
   CDS
   07-JAN-1999.
  WO9900516-A2
   misc_difference
   nervous system;
  Human; Sox1; neuronal stem cell gene; neuroblastic cell; cancer;
   from specific or general precursors.
  (MEDI-) MEDICAL RES COUNCIL.
   25-JUN-1998;
   Homo sapiens
   Human Sox1 encoding cDNA.
   22-APR-1999
   AAX16151;
  Lovell-Badge R,
                60 ATGTACAGCATGATGATGGAGACCGACCTGCACTCGCCCGGCGCGCCCCAGGCCCCCACG
   1 CCGGCCGTCTATGCTCCAGGCCCTCTCCTCGCGGTGCCGGTGAACCCGCCAGCCGCCCCG
  ATGTACAGCATGATGATGGAGACCGACCTGCACTCGCCCGGCGCGCCCCAGGCCCCCACG
  1999-095759/08.
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  Similarity
   Conservative
   (first entry)
  97GB-0013469
   98WO-GB01862
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   /note= "specifically claimed Sox1 control sequence"
60..1223
   neurological disorder;
  Pevny LH,
   /product= "Sox1"
   /*tag=
   /*tag=
  97.68;
99.88;
  b
   0;
   smith
  Score 488; DB 20;
Pred. No. 7.8e-68;
   Mismatches
  Length 1542;
   Indels
   1;
   Gaps
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   120
  59
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RRESULT 3
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A method has been developed for isolating neuroblastic cells from a cell population. The method comprises: (a) detecting Sox1 gene expression in the cells; and (b) isolating those cells expressing Sox1. Also described is a method for producing a cell committed to the neuronal lineage, comprising: (a) transfecting a pluripotent stem cell with a genetic construct encoding Sox1 expression; (b) culturing the stem cells to differentiate into neural cells; and (c) isolating those neural cells produced. The present sequence represents mouse Sox1 cDNA. Detection of Sox1 expressing cells is important in diagnosing and treating cancers of the nervous system. Neural stem cells are useful for the treatment of neurological disorders, especially for repair of accidentally induced
   Mus
   Mouse; Sox1; neuronal stem cell gene; neuroblastic cell; nervous system; neurological disorder; ss.
   07-JAN-1999
   Mouse Sox1 cDNA
  AAX16153 standard;
   181
   120
  Isolating neuroblastic cells from a population - by detecting the expression of the Soxl gene in the cells and sorting the cells to isolate those cells expressing Soxl \,
  Lovell-Badge R,
  25-JUN-1997;
   W09900516-A2
  240
  241
  180
   481
   420
   360
   361
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   301
   Disclosure; Page 43-44;
   (MEDI-) MEDICAL RES COUNCIL
   musculus
  ATCAGCAAGCGCCTGGGGGCCGAGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTC
  TGGTCCCGCGGGCAGCGCGCGAAGATGGCCCAAGAAGACCCCAAGATGCACAACTCGGAG
   GGCGGGGGCCCAAGGCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTG
   ATCGACGAGGCCAAGCGGCTGCGCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTAC
   TGGTCCCGCGGCAGCGCCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAG
  CICCIGGCGGCGCGCGGG
  CTCCTGGCGGCGCGCGGG
  CGGCCGCGCAAGACCAAGACGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGG
  (first entry)
  97GB-0013469
  98WO-GB01862
   Pevny LH,
   CDNA
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  60pp;
   500
   499
   mRNA;
   Smith
  English.
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  cancer;
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  trauma in the CNS or for correction of congenital or pathological diseases of the CNS. A patient with a neurological disorder can act as self-donor. Cells may be isolated from the patient and either sorted to extract neuroblasts, or treated in order to differentiate neuroblasts, from specific or general precursors.
   Sequence 2376 BP; 439 A; 772 C; 745 G;
   Chicken;
   Chicken Sox1 cDNA.
   22-APR-1999
  AAX16152 standard;
   376
   Gallus
   nervous system;
   436
   301
   616
  241
  556
  181
   496
   121
 (MEDI-) MEDICAL
                                     25-JUN-1998;
  07-JAN-1999
  856
  481
   421
  736
  361
   61
   Local
   <u>ب</u>
   ATGTACAGCATGATGAGAGACCGACCTGCACTCGCCCGGCGGCGCCCAGGCCCCACG
   CCGGCCGTCTATGCTCCAGGCCCTCTCCTCGCGGGTGCCGGTGAACCCGCCAGCCGCCG 60
   TGGTCCCGCGGCAGCGGCGCAAGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAG
  GCCGGGGGCCCAAGCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTG
  477;
  CTGCTAGCGGCCGGCGCGGG
   CTCCTGGCGGCGGGGG
  CGGCCGCGCCAAGACCAAGACGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGG
   ATCGACGAGGCCAAGAGACTGCGCGCGCTGCACATGAAGGAACACCCCGGATTACAAGTAC
   ATCGACGAGGCCAAGCGGCTGCGCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTAC
   ATCAGCAAGCGCCTCGGGGCCGAGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTC
   ATCAGCAAGCGCCTGGGGGCCGAGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTC
   gallus
   Similarity
   Sox1; neuronal stem cell gene; neuroblastic cell; system; neurological disorder; ss.
  Conservative
   (first entry)
                    97GB-0013469
                                      98WO-GB01862
 RES COUNCIL
  CDNA
   92.6%;
   to mRNA;
   Score 463.2;
Pred. No. 5.3e
0; Mismatches
  0;
  2312
  ВP
   420 T;
  5.3e-64;
  DB 20;
  23;
   0 other;
   Indels
  Length
   0;
   Gaps
   615
  300
   240
  555
  180
   495
  120
  675
  480
  420
  360
  855
  795
  735
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RESULT 5
   Matches
  Query Match
Best Local :
   population. The method comprises: (a) detecting Sox1 gene expression in the cells; and (b) isolating those cells expressing Sox1. Also described is a method for producing a cell committed to the neuronal lineage, comprising: (a) transfecting a pluripotent stem cell with a genetic construct encoding Sox1 expression; (b) culturing the stem cells to differentiate into neural cells; and (c) isolating those neural cells produced. The present sequence represents chicken Sox1 cDNA. Detection of Sox1 expressing cells is important in diagnosing and treating cancers of the nervous system. Neural stem cells are useful for the treatment of neurological disorders, especially for repair of accidentally induced trauma in the CNS or for correction of congenital or pathological diseases of the CNS. A patient with a neurological disorder can act as self-donor. Cells may be isolated from the patient and either sorted to extract neuroblasts, or treated in order to differentiate neuroblasts,
   Isolating neuroblastic cells from a population - by detecting the expression of the Soxl gene in the cells and sorting the cells to isolate those cells expressing Soxl
   Sequence 2312 BP; 421 A; 739 C; 714 G; 438 T; 0 other;
  A method has been developed for isolating neuroblastic cells from
  Disclosure; Page 41-43; 60pp; English.
   WPI; 1999-095759/08
   from specific or general precursors.
   Lovell-Badge R,
   455
   136
   436
  515
  316
  335
   196
   275
   164
   635
  496 GCGG 499
  575
   376
  395
  256
  224
  76
  16 CCAGGCCCTCTCCTCGCGGTGCCGGTGAACCCCGCCAGCCGCCCCGATGTACAGCATGATG
   GCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAG
  ATGGAGACGGACTTGCACTCGCCCGGCGGAGCCCCCGGCGCCC-----CGGCGGCGGC
   CCGG 638
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   ACCAAGACGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGAGGGCTGCTGGGCGCCGGC
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  Human; Sox1; neuronal stem cell gene; neuroblastic cell; cancer;
  Degenerate human Sox1 coding sequence RNA
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   /*tag= g
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  96..198
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   ..279
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  "replace(34..36, "agy")"
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   "replace(7..9, "agy")"
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  "cgn")"
   "agy")"
   "cun")"
   "cgn")"
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|                                              | variation<br>variation                                       | variation                                                                                              | variation                                                                          | variation                                                                                      | variation                                                                       | variation<br>variation                                     | variation                                                      | variation                                                             | variation                                                   | variation variation                                              | variation                                                                         | variation                                     | variation                                                          | variation                                                        | variation                                   | variation                                                                                      | variation                                              | variation                                     | variation                                                                   |
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| Oy 241 TGGTCCCC                              | 181<br>121                                                   | OY 121 AACCTCT()                                                                                       | QY         61 ATGTACA            : :           : :            Db         1 AUGUAYU | Query Match<br>Best Local Simi<br>Matches 237;                                                 | FT variation<br>FT<br>FT                                                        | FT FT variation                                            | FT variation FT FT FT variation                                | FT variation<br>FT                                                    | FT FT variation                                             | FT variation<br>FT                                               | FT variation                                                                      |                                               | FT variation<br>FT ran                                             | FT variation                                                     | var                                         | FT Variation                                                                                   |                                                        | FT variation<br>FT<br>FT                      | FT variation<br>FT                                                          |
|                                              | GGCGGGGGCCAAGGCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTG [ | AACCTCTCGGGCCCGGCGGGGCGGGGGGCGGCGGGGGGGG                                                               | ATGTACAGCATGATGATGAGACCGACCTGCACTCGCCCGGCCGG                                       | 58.4%; Score 292.2; DB 20; imilarity 53.9%; Pred. No. 2e-37; Conservative 103; Mismatches 100; | /note= "replace(10301032,<br>10841086<br>/*tag= bj<br>/note= "replace(10841086, | /*tag= bh<br>/note= "replace(1021<br>10301032<br>/*tag= bi | 10091011<br>/*tag= bg<br>/note= "replace(10091011,<br>10211023 | /note= "replace(985<br>10061008<br>/*tag= bf<br>/note= "replace(1006. | /note= "replace(982<br>985987<br>/*tag= be                  | /*Lay= bc<br>/note= "replace(961.<br>982984<br>/*taq= bd         | /*tag= bb<br>/note= "replace(955<br>961963                                        | /*tag= ba<br>/*tag= ba<br>/note= "replace(946 | /note= "replace(934.<br>937939<br>/*tag= az<br>/note= "replace(937 | /"Lay" ax<br>/note= "replace(928<br>934936<br>/*tag= ay          | /*tag= aw<br>/note= "replace(919.<br>928930 | /*tag= av<br>/*tag= av<br>/note= "replace(910.<br>919921                                       | 907909<br>/*tag= au<br>/note= "replace(907.<br>910 913 | /*11.873<br>/*tag= at<br>/note= "replace(871. | 836838<br>/*tag= as<br>/note= "replace(836838,                              |

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AC AAD1
XX AAD1
XX Huma
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The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can bused in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group I molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head
  Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded isolated nucleic acid comprising an NA Group 3 or 4 molecule -
  Claim 57; Page 87; 152pp; English.
   Stockert E,
   (LUDW-) LUDWIG INST CANCER RES. (SLOK) SLOAN KETTERING INST CANCER (CORR) CORNELL RES FOUND INC.
  Homo
  Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; synovial sarcoma; cytostatic; SOX2; ds.
   P-PSDB; AAE05810.
  21-JAN-2000; 2000US-0489101.
   WO200153349-A2
   19-JAN-2001; 2001WO-US02015
   Human small cell lung cancer associated gene, SOX2
  AAD11110 standard; DNA; 1085
  24-SEP-2001 (first entry)
  421
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  301
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  181
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  Scanlan MJ, Jager D,
   Location/Qualifiers
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   360
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Zhao QA,
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  20-JUN-2000;
19-JUL-2000;
  03-FEB-2000;
27-APR-2000;
  05-FEB-2001;
  WO200157190-A2
  (HYSE-)
   15-SEP-2000;
   09-AUG-2001.
  Homo sapiens.
   Human; cytokine;
   Human polynucleotide SEQ ID NO
  06-NOV-2001
   AAK52388 standard; cDNA; 1087
  and neck, or transitional cancer, leimyosarcoma or synovial The present sequence is a small cell lung cancer associated designated as NY-SCLC-1, encoding human SOX2 protein.
  Sequence 1085 BP; 253 A; 348 C; 348 G; 136 T; 0 other;
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   263
   203
   65
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   CGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCTGCTGCTGCCCCCGGCG
  CGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGGGCTCCTGGCGGCGGCC 496
   AGTGGAAGGTCATGTCCGAGGCCGAGGCCGGCGCTTCATCGACGAGGCCAAGCGGCTGC
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  GAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAAACCAAGA
   AGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGC
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Wang D,
Yang Y,
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2000US-0560875.
2000US-0598075.
2000US-0620325.
2000US-062325.
2000US-063325.
2000US-0693325.
2000US-0728422.
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  2001WO-US04098
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Wang J, Zhang J, Ren
Wejhrman T, Goodrich R;
  cell proliferation;
  52.9%;
84.2%;
   0;
  Score 264.4; DB 2
Pred. No. 4.1e-33;
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  Mismatches
  cell differentiation;
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F, C
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   Φ,
   Indels
   Length
   Cao
  ZW;
   0;
   sarcoma
   Gaps
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Matches 298
  The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
  WPI; 2001-476283/51.
P-PSDB; AAM79255.
   Claim
  Nucleic
  Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
   Sequence 1087
   Human; cytokine; vaccine; peptide
  AAK53268
   inflammation
   Human; cytokine; cell proliferation; cell differentiation; gene th vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation; ss.
   Human polynucleotide SEQ ID NO
              WO200157190-A2
  218
   158
   hes 298;
  278
   98
   AGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGAGGCCCAAGCGGCTGC
  CGGGGGGCGGCGGCACTCCACCGCGGCGGCCGCCGCCGCAGAAACAGCC
  AGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCG
  GCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGCGCGCAAGACCAAGA
  AGATTGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTTGGGCGCCCG
  AGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGC
   in
  acids encoding polypeptides with cytokine-like activities in diagnosis and gene therapy -
   Similarity
   standard; cDNA; 1116
   Conservative
   (first entry)
   BP; 250 A; 346 C; 357 G; 134 T;
   52.9%;
  immunomodulatory; cancer; inflammation;
  6221pp; English.
   0
   Score 264.4; DB 2
Pred. No. 4.1e-33;
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  DB 22; Length 1087;
   56;
   0 other;
   Indels
   0;
   451
   496
   listing
   Gaps
   262
  157
   202
  382
   322
   217
   442
   337
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20-OCT-2000;
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  03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
  The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, haematopolesis regulating activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
  Tang YT, Liu C,
Zhao QA, Wang D,
Xue AJ, Yang Y,
  05-FEB-2001;
   09-AUG-2001
   Sequence 1116 BP; 256 A; 362 C; 362 G; 136
   Note: Records for SEQ ID NO 2110 (AAK52581), (AAM80020) are omitted as the relevant pages were missing at the time of publication.
   Claim
   Nucleic acids encoding polypeptides with cytokine-like useful in diagnosis and gene therapy -  \label{eq:condition} % \begin{array}{c} \left( \left( \frac{1}{2}\right) + \left( \frac{1}{2}\right) 
   (HYSE-)
   inflammation.
  443
   271
   151
   91
  Local Similarity
les 298; Conser
   2001-476283/51.
AGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCCG
  CGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA
   AGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA 262
  CGGGGGGGCGGCGGCAACTCCACCGCGGCGGCGGCGGCGGCAACCAGAAAAAACAGCC
   AGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGAGGCCAAGCGGCTGC
   GCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGCGCGCAAGACCAAGA
   HYSEQ INC.
  AAM80135
   Page 4995; 6221pp; English.
   2000US-0654936.
2000US-0663561.
2000US-0693325.
2000US-0728422.
   2000US-0560875.
2000US-0598075.
2000US-0620325.
   Conservative
  2001WO-US04098
   2000US-0496914
   Drmanac RT,
D, Wang J, Zha
Wejhrman T,
   52.9%;
  .C RT, ....
J, Zhang J, kem ...
Tan T, Goodrich R;
   Score 264.4;
Pred. No. 4.1e
0; Mismatches
   0;
   4.1e-33;
  Zhou
F, (
   DB 22;
   T; 0 other;
   2111 (AAK52582) and 3666 from the sequence listing
   56;
   Chen
   ۳,
   Indels
  Length
   ŖĶ
  и С,
Wang
   activities
   Cao
  ZW;
   0
   Y,
   Gaps
  Ma
   150
   202
  442
  210
   270
  322
   330
  382
  ۲
  0;
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RESULT 9
TARKS2284

ID AAKS

XX AC AAKS

XX DT 06-1

XX UNIN

XX Hum

XX Hum

XX Hum

XX Hum

XX N Nex

XX PD 09

PN WO:

XX N Nex

XX N Nex

XX N Nex

XX N Nex

XX N Nex

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   Query Match
Best Local Similarity
   Matches
  The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating
   01-SEP-2000;
15-SEP-2000;
20-OCT-2000;
   activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
   Tang
Zhao
  Sequence
  Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and (AAM80020) are omitted as the relevant pages from the sequence liwere missing at the time of publication.
   Claim 1; Page 2766-2767; 6221pp; English.
  useful
  Nucleic
  WPI; 2001-476283/51.
P-PSDB; AAM79151.
  inflammation
  Xue AJ,
  03-FEB-2000;
27-APR-2000;
   05-FEB-2001;
   Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation; ss.
   06-NOV-2001 (first entry)
   AAK52284 standard;
  (HYSE-) HYSEQ INC.
   30-NOV-2000;
   20-JUN-2000;
19-JUL-2000;
  09-AUG-2001.
   WO200157190-A2
  Homo sapiens.
   AAK52284;
                                203
QA,
  cids encoding polypeptides with cytokine-like activities in diagnosis and gene therapy -
   Liu C,
Wang D,
Yang Y,
   Conservative
   2000US-0728422
   2000US-0663561.
2000US-0693325.
   2001WO-US04098
  2000US-0654936
   2000US-0598075
2000US-0620325
  2000US-0560875
  2000US-0496914
   BP; 262 A; 361 C; 364 G; 139
   Drmanac RT, Asundi V, Zhou
Wang J, Zhang J, Ren F, (
Wejhrman T, Goodrich R;
   cdna;
   52.9%;
84.2%;
   leukaemia, nervous system disorders, arthritis and
  SEQ
   1126
  Ħ
  0;
  Score 264.4; DB 2
Pred. No. 4.1e-33;
  ö
   ВP
  829
  Mismatches
  DB 22;
   T; 0 other;
  56;
  Chen
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  Indels
  Length 1126;
   Ŗŭ
  sequence listing
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   Wang
  Cao
   0,
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   Gaps
                        262
   157
  202
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  tο
   0;
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RESULT 10
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   В
   δÃ
   B
   03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
01-SEP-2000;
15-SEP-2000;
20-OCT-2000;
       The invention relates to polynucleotides (AAK51456-AAK53435) and encoded polypeptides (AAM78323-AAM80302) that exhibit activity encoded polypeptides (AAM78323-AAM80302) that exhibit activity encoded polypeptides (AAM78323-AAM80302) that exhibit activity which may be considered the production of other cytokines in other cell populations. The production of other cytokines in other cell populations. The polypeptides are useful in gene therapy, vacque peptide therapy. The polypeptides have various cytokine-like act perfectly the polypeptides have various cytokine-like act.
   Tang
Zhao
  Claim 1;
  useful
  Nucleic
   P-PSDB;
  05-FEB-2001;
   Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation; ss.
  (HYSE-) HYSEQ INC
  30-NOV-2000;
  09-AUG-2001.
   Human polynucleotide SEQ ID
   Homo sapiens.
  06-NOV-2001
   AAK53372 standard; cDNA; 1501
  398
  443
   338
   383
   278
  323
   218
   158
  2001-476283/51.
DB; AAM80239.
   CGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA
  CGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCTGCTGGCCCCCGGCG
  GAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAAACCAAGA
   AGTGGAAGGTCATGTCCGAGGGCCGAGAAGCGGCCGTTCATCGACGAGGCCCAAGCGGCTGC
   AGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCG
   AGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGC
   AGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGGCCG
   cids encoding polypeptides with cytokine-like activities, in diagnosis and gene therapy -
   Page
   Liu C,
Wang D,
Yang Y,
  2000US-0560875
2000US-0598075
2000US-0620325
2000US-0654936
2000US-0663561
2000US-0693325
2000US-0728422
  (first entry)
  2001WO-US04098
   2000US-0496914
   5070; 6221pp; English.
  Drmanac RT, Asundi V,
Wang J, Zhang J, Re
Wejhrman T, Goodrich
   NO
   Asundi V, L.
  BP
   2901.
  (AAK51456-AAK53435) and the that exhibit activity elating
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  u C,
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  397
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   217
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cell growth

growth

activity,

activities, vaccines or

Claim 2; Page 518-521; 2690pp; English.

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  Matches
                   Examining the ischemic condition (e.g. occlusive ischemia) by measuring expression levels of particular genes defined in the specification or by determining the expression profile of a gene group comprising these
   07-MAR-2002
  18-MAY-2000; 2000JP-0145977.
   WO200188188-A2
  Mouse ischaemic condition related cDNA sequence SEQ ID NO:179
  activin/inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
             genes
  Ishikawa K,
   (UYNI-) UNIV NIHON SCHOOL JURIDICAL PERSON
   18-MAY-2001; 2001WO-JP04192
  22-NOV-2001
   vasospastic
   Mouse; ischaemia;
  ABI99318 standard; cDNA; 2283 BP
  Sequence 1501 BP; 391 A; 428 C; 450 G; 220 T;
   Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and (AAM80020) are omitted as the relevant pages from the sequence liwere missing at the time of publication.
   inflammation.
  143
   391
  443
   331
   323
   151
  11
18
   91
  Local
  AGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCCCA
  2002-034733/04.
DB; ABB57082.
   CGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCGGCTGCTGGCCCCCGGCG
  CGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGGGCTCCTGGCGGCGGCC 496
  GAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAAACCAAGA
   AGTGGAAACTTTTGTCGGAGACGGAGAAGCCGCCGTTCATCGACGAGGCTAAGCCGCCTGC
   AGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGAGGCCAAGCGGCTGC
   AGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCG
  AGATGGCCCAGGAGAACCCCCAAGATGCACCAACTCGGAGATCAGCAGCGCCTGGGGGGCCG
  CGGGGGGGGGGGCGCCAACTCCACCGCGGCGGCGGCGGCGGCAACCAGAAAAACAGCC 150
  298;
   Similarity
  aemia; compressive ischaemia; occlusive ischaemia;
ischaemia; ischaemic condition; ischaemic disease
   Conservative
  Asai S,
   (first entry)
  52.9%;
  Takahashi Y,
   0;
  Pred. No. 4e-
0; Mismatches
   Score 264.4;
  Nagata
   4e-33;
   DB 22; Length
   56;
  12
  Ishii
  other;
   Indels
  disease;
   444
  0,
  SS
   listing
   Gaps
  3666
  262
  442
   210
  330
   270
  322
   0;
```

```
RESULT 12
AADI1118
ID AADI1
XX
AC AADI1
XX
AC AADI1
XX
BY
AC AADI1
XX
AC AADI1
XX
Human
XX
Human
XX
Human
XX
Human
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Homo
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Homo
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FFT CDS
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  γ
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   Вb
  δÃ
  Query Match
Best Local Sim:
Matches 300;
  The present invention describes a method for examining ischaemic conditions, comprising measuring the expression levels of particular genes (1) in a test sample or determining the expression profile of a gene group in the sample comprising genes selected from (1). The method is useful for examining the ischaemic condition (e.g. compressive ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring expression levels of particular genes (AB199202 to AB199912, encoding the protein sequences in ABB57020 to ABB57374) or by determining the expression profile of a gene group comprising these genes. The expression levels or expression profiles produced by these genes are used as an indicator when screening for ischaemic condition improving drugs or therapeutics for ischaemic diseases. AB199013 and AB199914 represent PCR primers for a mouse ischaemic condition related sequence, which are used in the exemplification of the present invention.
  Human; small cell lung cancer; therapy; hCAAP; nucleic acid; melanoma; cancer; colon; breast; head; neck; transitional car leimyosarcoma; synovial sarcoma; cytostatic; SOX3; ds.
  Sequence 2283 BP; 597 A; 583 C; 614 G; 488 T; 1 other;
   24-SEP-2001
  AAD11118
   AAD11118 standard; DNA; 2509
   534
  414
  594
  474
   197
   774
  497
  437
   317
   257
  Local Similarity
   ရှ
   CCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGC 256
  sapiens
  CG 498
  GGCTGCGCGCTCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCGCGGCGGAAAA
   GCGCGGAGTGGAAACTTTTGTCCGAGACCGAGAAGCGGCCGTTCATCGACGAGGCCAAGC
  GGGCCGAGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGAGGCCAAGC
  GGCGCAAGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGG
  ACAGCCCGGACCGCGTCAAGAGGCCCATGAACGCCTTCATGGTATGGTCCCCGGGGGCCAGC
  small cell lung
  Conservative
  (first entry)
   Location/Qualifiers 441..1773
              /product=
                              /*tag=
   52.6%;
82.9%;
   cancer associated gene,
                "Human SOX3 protein"
  0;
   ВP
  Pred.
   Score 262.8;
  Mismatches
  No. 6.7e-33;
smatches 62;
  DB 24; Length
   transitional cancer, SOX3; ds.
  Indels
  0;
  Gaps
  496
   316
   713
  653
   376
   593
  533
   773
  0
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   Qy
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  QY
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  RESULT
   Query Match
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   Matches
  The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a ChAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a small cell lung cancer associated gene designated as NY-SCIC-9, encoding human SOX3 protein.
  Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded isolated nucleic acid comprising an NA Group 3 or 4 molecule -
                                   1133
   1073
  1013
  Claim 57; Page 98-99; 152pp; English.
  Stockert E,
   Sequence 2509 BP; 456 A; 818 C; 757 G; 478 T; 0 other;
   WPI; 2001-457597/49
   (LUDW-) LUDWIG INST CANCER RES (SLOK ) SLOAN KETTERING INST CANCELL RES FOUND INC.
  21-JAN-2000; 2000US-0489101.
   19-JAN-2001; 2001WO-US02015
  WO200153349-A2
  833
   368
  953
   308
   893
   188
  773
   Match 51.7%;
Local Similarity 80.9%;
  AGGCCAAGCGGCTGCGCGCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGC
  GCGGGCAGCGGCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCA 307
  GCGGGGGTACAGACCAGGACCGTGTGAAACGGCCCATGAACGCCTTCATGGTATGGTCCC
   GCGCCAAGGCCAACCAGGACCGGGTCAAACGGCCCATGAACGCCTTCATGGTGTGGTCCC
   CGAACGCAGCCGGCGCGCAACTCGGGCGCGCAGCAGCGGTGGTGCGAGCGGAGGTG 832
                                   CTCCCGGTGCCG
   CGGCCGGCGCGG 499
   GCCGCAAGACCAAGACGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGGGCTCCTGG 487
  AGCGCTTGGGCGCCGACTGGAAACTGCTGACCGACGCCGAGAAGCGACCATTCATCGACG
  AGCGCCTGGGGGCCGAGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACG
   GCGGGCAGCGCCAAAATGGCCCTGGAGAACCCCCAAGATGCACAATTCTGAGATCAGCA
  301; Conservative
   Scanlan MJ, Jager D,
  Score 258.4; DB 22; Pred. No. 3.2e-32; 71;
  CANCER RES
  01d LJ,
   DB 22; Length 2509;
  Gure AO,
   Indels
  Chen
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  bу
  Gaps
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  1012
  247
   952
  892
  0;
  Qy
  Db
  Qy
  Query Match
Best Local S
Matches 321
   Sequence
   P-PSDB;
  11-OCT-2001
   WO200175067-A2
   Homo sapiens
   13-FEB-2002
  AAS87738;
  (HYSE-) HYSEQ INC.
  93
            CAGCAGCGGTGCTGCGAGCGGAGGTGGCGGGGGTACAG-----
   2001-639362/73
  supplement;
   321;
   RT,
  Similarity
   ABG23551.
  Liu
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CC The invention relates to isolated polynucleotide (I) and CC polymerase (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CPCR) primers of the production of (II) and the polynucleotides are also used in diagnostics as expressed sequence tags CC for identifying expressed genes. (I) is useful in gene therapy techniques CC (II), (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as CC afood supplement. (II) and its binding partners are useful in medical considers involving aberrant protein expression or biological activity. CC diagnostics, forensics, gene mapping, identification of mutations in CC diagnostics, forensics, gene mapping, identification of mutations conseponsible for genetic disorders or other traits to assess biodiversity and CC and to produce other types of data and products dependent on DNA and CC amino acid sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of the invention.

CC Note: The sequence data for this patent did not appear in the printed consectification, but was obtained in electronic format directly from WIPO at figure in the printed process.
  Claim 1; SEQ ID No 23542; 103pp; English
  New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
   31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
   30-MAR-2001; 2001WO-US08631.
   DNA encoding novel human diagnostic protein #23542
   AAS87738 standard; cDNA; 2378
   CGGGGGCGGAGGCGGGGGGCGGCGGCGGCGGGGGCCCAAGGCCAACCAGGACCGGGT 212
   CCCGGGAGGCGCAGGCAAGAGTAGTGCGAACGCAGCCGGCGGCGCGAACTCGGGCGGCGG
  chromosome mapping; gene mapping; gene therapy; forensic.upplement; medical imaging; diagnostic; genetic disorder;
   2378 BP; 590 A; 708 C; 664 G; 416 T; 0 other;
  Conservative
  (first entry)
  49.0%;
  ΥT
  0,
  Score 245.2; DB 2
Pred. No. 3.6e-30;
0; Mismatches 78
   ВP
  DB 23;
  78;
  Indels
-ACCCAGGACCGTGT
   Length
   forensic;
  9;
  Gaps
   SS
   788
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RESULT 14
AAD11119
ID AD11119
XX AAD11
XX AAD11
XX AAD11
XX AAD11
XX Human
KW Human
KW Ieimy
XX Homo
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The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression onset of a condition characterised by expression of an abnormal amount of a
  (LUDW-)
(SLOK )
(CORR )
  Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded isolated nucleic acid comprising an NA Group 3 or 4 molecule -
  Human; small cell lung cancer; therapy; hCAAP; nucleic acid; melanoma; cancer; colon; breast; head; neck; transitional car leimyosarcoma; synovial sarcoma; cytostatic; SOX21; ds.
   1081
   1021
  Claim 57;
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  21-JAN-2000; 2000US-0489101
  19-JAN-2001; 2001WO-US02015
   26-JUL-2001
   WO200153349-A2
  Homo sapiens.
   Human small cell lung cancer associated
   24-SEP-2001
  AAD11119;
  AAD11119 standard;
   452
   392
  961
  332
  901
   272
   841
   213
  CAAACGGCCC-ATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGGCAAGATGGCCC
  2001-457597/49
   AGAAAGATAAGTACTCCCTGCCCAGCGGCCTCCTGCCTCCCCGGTGCCG
  ACATGAAGAAGAACACCGGATTACAAGTACCGGCCGCGCGCAAGACCCAAGACGCTGCTCA
  TCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGACGACGCCAAGCCGCCTGCCCTGC
  CGGAGAACCCCAAGATGCACAATTCTGAGATCAGCAAGCGCTTGGGCGCCGACTGGAAAC
   AGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGGCCGAGTGGAAGG
   ACATGAAGGAGTATCCGGACTACAAGTACCGACCGCGCCGCAAGACCAAGACGCTGCTCA
  TGCTGACCGACGCCGAGAAGCGACCATTCATCGACGAGGCCAAGCGACTTCGCGCCGTGC
  LUDWIG INST CANCER RES.
SLOAN KETTERING INST CANCER RES.
CORNELL RES FOUND INC.
   AAE05814.
  Page 100-105; 152pp; English.
  Scanlan MJ,
   (first entry)
   Location/Qualifiers
  /*tag= a
/product= "Human SOX21 protein"
  /*tag=
  DNA;
  8372
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  ВP
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   01d LJ,
   gene,
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  SOX21.
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   cancer;
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  Matches
  Query Match
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11-APR-2000;
21-JUN-2000;
01-SEP-2000;
05-SEP-2000;
14-SEP-2000;
19-DEC-2000;
08-JAN-2001;
  Human; cytostatic; antitumour;
tumour; lung cancer; ss.
  Lung
   1310
   1250
  1190
   1070
   protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, medanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a small cell lung cancer associated gene designated as NY-SCLC-10, encoding human SOX21 protein.
   11-APR-2001;
   18-OCT-2001
   WO200177168-A2
  29-JAN-2002
  AAS61625;
  AAS61625 standard;
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  Sequence 8372 BP;
   1130
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  153 CGGGGGCGGAGGCGGGGGGGGGGGGGGGGGCGAAGGCCAACCAGGACCGGGT
  393
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   \omega
   small cell carcinoma antigen,
  sapiens
  GAAGGACAAGTTCGCCTTCCCGGTGCCCTACGGCCTGGGCGGCGTGG
  CAAACGGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCAAGATGGCCCA
  318;
   GGGCGGCGGCGGCAGCCGCCAGGGCCAGGCCATGTCCAAGCCGGTGGACCACGT
   GCCGAGCGGGTCTCCGCGGGCCAGCCCAACATTGATTTCCTCCGGGCCGAGGGCCGAGGGCCCC
   Similarity
2000US-196780P.
2000US-213361P.
2000US-229763P.
2000US-230629P.
2000US-232565P.
2000US-257037P.
2001US-260796P.
  Conservative
  2001WO-US11859
   (first entry)
  1996 A; 2143 C; 2104 G; 2124 T;
   CDNA;
  45.7%;
   412
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  Score 228.6; DB Pred. No. 1.2e-27
   ВP
  lung
   Mismatches
  CDNA #166.
   small cell
   DB 22;
   149;
  cancer
  5 other;
   Indels
   Length 8372;
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  Gaps
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  1369
   392
  1249
  1129
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Search completed: October 10, Job time: 91 secs
  The invention relates to novel isolated lung small cell cancer antigen CC polynucleotides (I) and polypeptides (II) used in a method of detecting CC cancer in a patient. The method is optionally performed by cancer in a patient. The method is optionally performed by cCC utilising oligonucleotides (III), where the biological sample CCC from the patient is contacted with (III), detecting the amount of polynucleotide to (III) in the sample and comparing the CCC amount of polynucleotide to a predetermined cut-off value and thereby CCC determining cancer in a patient. (I), (II) or antigen presenting cells CCC expressing (II) is useful for stimulating and/or expanding T cells SCC expressing (II) is useful for stimulating and/or expanding T cells CCC with one of the components under conditions to permit the stimulation CCC and/or expansion of the cells. A composition comprising (I) is useful for stimulating an immune response in a patient and for inhibiting the CCC development of a cancer especially lung cancer in a patient. An CCC constant of T cell population is useful for removing tumour cells from the CCC constant and for inhibiting the development of cancer in a patient. An As51460-AAS51874 represent novel human lung small cell CCC cancer antigen coding sequences of the invention.
   Query Match
Best Local S
  Matches
   Lung tumour polynucleotide and polypeptides useful in therapy diagnosis of cancer especially lung cancer % \left( 1\right) =\left\{ 1\right\} 
   Claim 1; Page 180; 295pp; English.
  WPI; 2002-010896/01.
  Sequence 412 BP; 83 A; 133 C; 144 G; 51 T; 1 other;
   (CORI-) CORIXA CORP.
   444
   195
  135
  384
   324 GTGGAAGGTCATGTCCGAGGCCGAGGCCGAGAGCGCTTCATCGACGAGGCCAAGCGGCTGCG 383
  255
   264 GATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCGA 323
  75
   15
  Match 44.28;
Local Similarity 84.18;
Les 249; Conservative
  CGCGCTGCACATGAAGGAGCACCCGGATTACAAGTACCGGCCGCGCGCAAGACCAAGAC 443
  GATGGCCCAGGAGAACCCCCAAGATGCACCAACTCGGAGATCAGCCAAGCGCTTGGGCGCCGA 134
   GGACCACGTCAAGCGGCCCATGAACGCCTTCATGGTGGTGGTCGCGGGGCTCAGCGGCGCAA 74
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   Wang T, Mohamath R,
                    2002, 14:28:39
  Score 220.8; DB 24; Length 412;
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Sequence:
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Maximum I
   Result
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  Searched:
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  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
   Scoring table:
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   on:
           number of hits satisfying chosen
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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| OB IN ENGRETHMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 22 C C C C C C C C C C C C C C C C C C                                                                                                                                                                                                                                                                            |
| CCAN<br>CCAN<br>CCAN<br>CCAN<br>CCAN<br>CCAN<br>CCAN<br>CCAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 44444444444444444444444444444444444444                                                                                                                                                                                                                                                                            |
| Application Application 1143878 CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: CORMATION: C |                                                                                                                                                                                                                                                                                                                   |
| Phication US/08860 Philoation US/08860 ATTION: ATTION: GOODIGELLOW, PETER ENNTION: SOX.9 GEN ENTION: SOX.9 GEN ENTION: USE IN TH OOD GARDERES: SCULLY, SCOTT, M OO GARDER CITY Pla CORNEL FORM: US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A. US.A.  | 1898<br>1898<br>1898<br>1898<br>2839<br>2839<br>2839<br>2839<br>2033<br>2032<br>4722<br>4722<br>1444<br>1444<br>1444<br>1444<br>1444<br>144                                                                                                                                                                       |
| Peter Peter WW, Peter WW, Peter 21 21 21 35 31 35 31 31 34 366  Peter WAR Peter Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Version Versio | 211511144550111511                                                                                                                                                                                                                                                                                                |
| A-20 , Application US/08860635A 6143878 6143878 FORMATION: TY: GOODGELLOW, Peter TY: GOODGELLOW, Peter TY: GOODGELLOW, Peter TY: GOODGELLOW, Peter TY: GOODGELLOW, Peter TY: GOODGELLOW, Peter TY: GOODGELLOW, PETER THE ADDRESS: 21 MDENCE ADDRESS: 22 400 Garden City Plaza Garden City NY NY XY: U.S.A. 11530 REALADABLE FORM: TYPE: Diskette FER: IBM COMPALLILe FER: TON COMPALLILe TYPE: DISKETTE TYPE: DISKETTE TYPE: DISKETTE TYPE: DISKETTE TYPE: DISKETTE TYPE: DISKETTE TYPE: DISKETTE TYPE: DISKETTE TYPE: DISKETTE TYPE: CDATA: APPLICATION DATA: APPLICATION UMBER: AU PM9714 DATE: 29-NOV-1994 DATE: 29-NOV-1994 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1996 DATE: 31,346 DATE: 31,346 DATE: 31,346 DATE: 31,346 DATE: 31,346 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1995 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: 29-NOV-1996 DATE: | US-07-814-964-8 US-08-258-442-8 US-08-328-809-3 PCT-US2-11107-8 US-07-814-964-6 US-08-328-809-1 US-09-015-003-1 US-09-015-003-1 US-09-015-003-1 US-09-045-284A-1 US-08-979-608A-14 US-07-814-964-9 US-08-258-442-9 US-08-258-442-9 US-08-676-967-5 US-08-676-967-5 US-08-676-974-5 US-09-098-487-5                |
| BONE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                   |
| OR CARTILAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence |
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  Patent No. 6316597
GENERAL INFORMATION:
  Sequence 20, Application US/09281476 Patent No. 6316597
  Query Match
Best Local
   APPLICATION NUMBER: AU PM9835
FILING DATE: 05-DEC-1994
APPLICATION NUMBER: PCT/AU95/00799
FILING DATE: 29-NOV-1995
ATTORNEY/AGENT INFORMATION:
NAME: DIGIGIO, Frank S.
REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 10981
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
   Matches
                                      INFORMATION FOR SEQ ID NO:
  APPLICANT: KOOPMAN, Peter
APPLICANT: GOODIELIOW, Peter
TITLE OF INVENTION: SOX-9 GENE AND PROTEIN AND
TITLE OF INVENTION: USE IN THE REGENERATION OF
NUMBER OF SEQUENCES: 21
 SEQUENCE CHARACTERISTICS:
LENGTH: 3923 base pair
  CLASSIFICATION:
PRIOR APPLICATION DATA:
   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 1.5
CURRENT APPLICATION DATA:
   COMPUTER READABLE FORM:
   CORRESPONDENCE ADDRESS:
   269
   748
  149
   688 ACGCCTTCATGGTGTGGGCGCAGGCGCGCGCACGAAGCTCGCGGACCAGTACCCGCACT 747
  STREET: 400 Garden City
  89
   TELEX:
   TELEFAX:
   FILING DATE:
   APPLICATION NUMBER:
   FILING DATE
  APPLICATION NUMBER:
   COUNTRY: UZIP: 11530
  Local Similarity
   MEDIUM TYPE:
  ADDRESSEE:
   AGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGCGCTGCACATGAAGGAGCACC 328
   TGCACAACTCGGAGATCAGCAAGCGCCTGGGCCGAGTGGAAACTTTTGTCGGAGACGG
  CCATGCCGGTGCGCGTCAACGGCTCCAGCAAGAACAAGCCGCACGTCAAGCGGCCCATGA 687
  CCGCGGCGGCGGCGGCAACCAGAAAAACAGCCCGGACCGCGTCAAGCGGCCCATGA 148
  AGGAGGCCACGGAGCAGACGCCATCTCCCCCAACGCCAT 967
  CGGATTACAAGTACCAGCCGCGGCGGAGGAAGTCGGTGAAGAACGGGCAGGCGGAGGCAG
   ATGCCTTCATGGTGTGGTCCCGCGGGGCAGCGGCGCAAGATGGCCCAGGAAGAACCCCCAAGA 208
   CGCTGCCCGGCGGCTGCTGGCCCCCGGCGCAATAGCAT 428
  CGGATTATAAATACCGGCCCCGGCGGAAAACCAAGACGCTCATGAAGAAGGATAAGTACA 388
  TGCACAACGCCGAGCTCAGCAAGACGCTGGGGCAAGCTCTGGAGACTTCTGAACGAGAGCG
   215;
   ΝY
  400 Garden City Plaza
3923 base pairs
   516-742-4366
  U.S.A.
   Conservative
  Scully,
   Diskette
  28.0%;
   Scott, Murphy & Presser
  US/09/281,476
  08/860,635
   0;
  Score 140; DB 3; Length 3923; Pred. No. 1.6e-22;
  Mismatches
   125;
  BONE OR CARTILAGE
   Indels
  0;
  Gaps
  867
   807
  268
  0
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; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
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  US-08-196-016A-1
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  Sequence 1, Application US/08196016A Patent No. 5596089
  Patent No.
   Query Match
Best Local Similarity
Matches 215; Conserv
   INFORMATION FOR SEQ ID NO:
   GENERAL INFORMATION:
   MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
   TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEFAX: 201-343-1684
  APPLICANT: SILVERSIDES, David W. APPLICANT: DANEAU, Isabelle M.F. APPLICANT: HOUDE, Alain TITLE OF INVENTION: SRY GENOMIC TITLE OF INVENTION: SEXING
           SEQUENCE CHARACTERISTICS:
LENGTH: 1661 base pair
   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
  APPLICANT:
   ATTORNEY/AGENT INFORMATION:
  CORRESPONDENCE ADDRESS:
   NUMBER OF SEQUENCES:
  TELEFAX: 202
TELEFAX: 133521
   628
   928
   748
   883
   149
   389 CGCTGCCCGGCGGCTGCTGGCCCCCGGCGCAATAGCAT 428
   209
   NAME: JACKSON, David A. REGISTRATION NUMBER: 26,742
  CLASSIFICATION:
   APPLICATION NUMBER: US/08/196,016A FILING DATE: 14-FEB-1994
   COUNTRY:
  STATE:
   ADDRESSEE: KLAUBER & JACNSON
STREET: Continental Plaza, 411 Hackensack Avenue
   89 CCGCGGCGGCGGCCGGCAACCAGAAAAAACAGCCCGGGACCGCGTCAAGCGGCCCATGA 148
   AGGAGGCCACGGAGCAGACGCACATCTCCCCCAACGCCAT 967
  CGGATTATAAATACCGGCCCCGGCGGAAAACCAAGACGCTCATGAAGAAGGATAAGTACA
  ATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCAAGATGGCCCAAGAACACCCCAAGA 208
   TGCACAACGCCGAGCTCAGCAAGACGCTGGGGCAAGCTCTGGAGACTTCTGAACGAGAGCG
   TGCACAACTCGGAGATCAGCAAGCGCCTGGGCCCCGAGTGGAAACTTTTGTCGGAGACGG
   ACGCCTTCATGGTGTGGGCGCAGGCGCGCGCGCAGGAAGCTCGCGGACCAGTACCCGCACT 747
   CCATGCCGGTGCGCGTCAACGGCTCCAGCAAGAACAAGCCGCCACGTCAAGCGGCCCATGA 687
   CGGATTACAAGTACCAGCCGCGGGGGAGGAAGTCGGTGAAGAACGGGCAGGCGGAGGCAG
   AGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGCGCTGCACATGAAGGAGCACC
  07601
nucleic
  N. J
   U.S.A.
  Conservative
  28.0%;
63.2%;
   SRY GENOMIC SEQUENCES
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   0;
  Score 140; DB 4;
Pred. No. 1.6e-22;
   Mismatches
   AND USE IN TISSUE
   125;
  #1.30
   Length 3923;
   Indels
   0;
   Gaps
   867
   927
   328
   807
   268
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HYPOTHETICAL:

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  US-08-196-016A-1
  US-08-196-016A-2
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  Matches
  Query Match
   Sequence 2, Application US/08196016A Patent No. 5596089
  GENERAL INFORMATION:
                   SEQUENCE CHARACTERISTICS:
LENGTH: 1667 base pairs
   1052 GGAGAGCAGCCAGGACCACGTCAAGCGACCCATGAACGCCTTCATTGTGTGGTCTCGTGA 1111
  POSITION IN GENOME:
CHROMOSOME/SEGMENT: Y-chromosome,
   ANTI-SENSE:
   1292 GAGAGCCAAGAGGCCACAGAA 1312
   1232 ACAGAGACTACTAGCCATACACCGAGACAAATACCCGGGCTATAAATATCGACCTCGTCG
   1172 GCTGGGATATGAGTGGAAAAGGCTTACAGATGCTGAAAAGCGCCCCATTCTTTGAGGAGGC
   FILING DATE: 14-FEB-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: JACKSON, David A.
  COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0,
CURRENT APPLICATION DATA:
   REGISTRATION NUMBER: 26,742
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
  CORRESPONDENCE ADDRESS:
   114 GAAAAACAGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGG 173
  NUMBER OF SEQUENCES:
   174 GCAGCGGCGCAAGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCG 233
   294 TAAGCGGCTGCGAGCGCTGCACATGAAGGAGCACCCGGGATTATAAATACCGGCCCCCGGCG 353
  234 CCTGGGCGCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGC 293
   Local Similarity
  TELEPHONE: 201-343-1684
  CITY: Hackensack
   APPLICATION NUMBER:
  ZIP: 07601
  COUNTRY:
   STATE:
  STREET:
   ADDRESSEE: KLAUBER & JACKSON
   TELEX: 133521
STRANDEDNESS
   GAAAACCAAGACGCTCATGAA 374
  182;
             nucleic acid
  и.
Ч
  Continental Plaza, 411 Hackensack Avenue
  Conservative
  ð
  U.S.A.
  Floppy disk
   26.9%;
   US/08/196,016A
  0
   Score 134.6;
Pred. No. 2.
  Mismatches
  Version #1.30
   SRY gene
  2.1e-21
   DB 1;
  79;
  Length 1661;
  Indels
  0;
  Gaps
  1291
  1231
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  US-08-196-016A-2
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  RESULT 5
US-08-860-635A-18
  8
  Best Local Similarity Matches 173; Conserv
   Sequence 18, Application US/08860635A Patent No. 6143878
   Query Match
  GENERAL INFORMATION:
APPLICANT: Koopman, Peter
APPLICANT: Goodfellow, Peter
  APPLICATION NUMBER: US/08/860,635A FILING DATE: 29-MAY-1997 CLASSIFICATION: 514 PRIOR APPLICATION DATA: APPLICATION NUMBER: AU PM9714 FILING DATE: 29-NOY-1994 APPLICATION NUMBER: AU PM9835 FILING DATE: 05-DEC-1994 APPLICATION NUMBER: PCT/AU95/00799 FILING DATE: 29-NOY-1995
FILING DATE: 29-NOV-1995
ATTORNEY/AGENT INFORMATION:
NAME: DIGIGITIO, Frank S.
REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 1096
TELECOMMUNICATION INFORMATION:
TELEPHONE: 516-742-4343
  TOPOLOGY: lin
MOLECULE TYPE:
HYPOTHETICAL: 1
   ANTI-SENSE: NO POSITION IN GENOME:
  OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ Version 1.5
CURRENT APPLICATION DATA:
   TITLE OF INVENTION: SOX-9 GENE AND PROTEIN AND TITLE OF INVENTION: USE IN THE REGENERATION OF BONE OR CARTILAGE
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
  CORRESPONDENCE ADDRESS:
  NUMBER OF SEQUENCES:
   851 GAAAAGTGGCTCTAGAGAACCCTCAAATGCAAAACTCAGAGATCAGCAAGTGGCTGGGAT 910
   791 GCCAGGATCGTGTCAAGCGACCCATGAACGCTTTCATTGTGTGGTCTCGTGATCAAAGGA 850
  122 GCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGC 181
   182 GCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCG 241
  362 AGACG 366
   971 TACAGGCGGTGCACCGAGATAAATACCCGGGCTATAAATACCGACCTCGTCGCAAGGGAG 1030
   911 GCAAGTGGAAAATGCTTACAGAAGCCGAAAAGCGCCCATTCTTCGAGGAGGCACAGAGGC
  242 CCGAGTGGAAACTTTTGTCGGAGAACGGGAGAGGCGGTTCATCGACGACGAGGCTAAGCGGC 301
   CHROMOSOME/SEGMENT:
  COMPUTER:
   COUNTRY: UZIP: 11530
  STATE:
   STREET:
   ADDRESSEE:
  AGAGG 1035
  TGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACCA 361
   Garden City
  ΥN
   400 Garden City Plaza
  Conservative
  U.S.A.
   linear
  IBM Compatible
   Scully,
  NO
  Diskette
   (genomic)
   26.0%;
70.6%;
   SOX-9 GENE AND PROTEIN AND
   Scott, Murphy & Presser
   Y-chromosome, SRY gene
  Score 129.8; DB 1
Pred. No. 2.4e-20;
0; Mismatches 72
   DB 1;
   Length 1667;
   0
   Gaps
   970
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0,

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RESULT 6
US-09-281-476-18
  Qy
  밁
  Q
  B
  Qy
   뫄
   Qγ
   В
   δÃ
  US-08-860-635A-18
  Sequence
APPLICATION NUMBER: AU PM9835
FILING DATE: 05-DEC-1994
APPLICATION NUMBER: PCT/AU95/00799
FILING DATE: 29-NOV-1995
ATTORNEY/AGENT INFORMATION:
NAME: DiGiglio, Frank S.
REGISTRATION NUMBER: 31,346
REFERENCE/DOCKET NUMBER: 10981
  GENERAL INFORMATION:

APPLICANT: Koopman, Peter
APPLICANT: Goodfellow, Peter
TITLE OF INVENTION: SOX-9 GENE AND PROTEIN AND
TITLE OF INVENTION: USE IN THE REGENERATION OF BONE OR CARTILAGE
   Patent No.
   Matches
   Query Match 25.9%;
Best Local Similarity 67.8%;
  TELEX:
INFORMATION FOR SEQ ID NO:
   SOFTWARE: FastSEQ Version 1.5
CURRENT APPLICATION DATA:
  COMPUTER READABLE FORM:
  PRIOR APPLICATION DATA:
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Scully, Scott,
  SEQUENCE CHARACTERISTICS:
LENGTH: 2249 base pair
   MOLECULE TYPE:
   630
  149
   570
  MPUILM TYPE: Disactible Compatible
   810 CCGATTACAAGTACCAGCCCCGGCGGA 836
  329 CGGATTATAAATACCGGCCCCGGCGGA 355
   750
   269
  690
   209
  CLASSIFICATION:
  FILING DATE:
   APPLICATION NUMBER:
  FILING DATE:
   OPERATING SYSTEM:
  APPLICATION NUMBER:
  COUNTRY:
  STREET:
   TYPE:
  89 CCGCGGCGGCGGCGGCGAACCAGAAAAACAGCCCGGACCGCGTCAAGCGGCCCATGA 148
  LENGTH: 2249 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
   AGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGCGCTGCACATGAAGGAGCACC 328
  TGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCGAGTGGAAACTTTTGTCGGAGACGG 268
  ACGCCTTCATGGTGTGGGCGCAGGCTGCGCGCAGGAAGCTGGCAGACCAGTACCCGCATC 689
   ATGCCTTCATGGTGTGCCCCCCGGGCAGCAGCCCAAGATGGCCCAAGAAACCCCCAAGA 208
   CCATGCCCGTGCGCGTCAACGGCTCCAGCAAGAACAAGCCACACGTCAAGCGACCCATGA 629
  181;
   18, Application US/09281476 o. 6316597
  11530
   Garden City
  NΑ
  400 Garden City Plaza
  U.S.A.
  Conservative
   CDNA
  08/860,635
  US/09/281,476
   18:
  0;
   Murphy & Presser
  Score 129.4; DB 3
Pred. No. 3.1e-20;
  Mismatches
  DB 3;
   86;
   Indels
  Length 2249;
   0;
   Gaps
   0;
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  US-08-239-276-6
   RESULT 7
   QΥ
   Db
  Qy
  В
   Qy
   ; MOLECULE TYPE: US-09-281-476-18
  Sequence 6, Application US/08239276 Patent No. 5840836
   Matches 181;
  Query Match
   GENERAL INFORMATION: APPLICANT: Rabin,
  INFORMATION FOR SEQ ID NO:
PRIOR APPLICATION DATA: APPLICATION NUMBER:
   PRIOR APPLICATION DATA:
  ZIP: 10591-5144

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch,
   PRIOR APPLICATION DATA:
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/872,646
FILING DATE: 08-JUN-1992
  SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Sprung Kramer Schaefer & Briscoe
STREET: 660 White Plains Road
   TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING
   NUMBER OF SEQUENCES:
  SEQUENCE CHARACTERISTICS:
  810 CCGATTACAAGTACCAGCCCCGGCGGA 836
  149
  570
                                APPLICATION NUMBER: FILING DATE: 04-DEC
  APPLICATION NUMBER: FILING DATE: 14-JUN
  APPLICATION NUMBER: US/0 FILING DATE: 05-MAY-1994 CLASSIFICATION: 530
   750
   269 AGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGCGCTGCACATGAAGGAGCACC
  069
   209
   630
  COMPUTER:
   STREET: 660 While CITY: Tarrytown
   OPERATING SYSTEM:
   COUNTRY:
  89 CCGCGGCGGCGGCGGCAACCAGAAAAAACAGCCCGGACCGCGTCAAGCGGCCCATGA 148
  LENGTH: 2249 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
   Local Similarity
   TELEFAX:
  TOPOLOGY:
  TELEPHONE:
  CGGATTATAAATACCGGCCCCGGCGGA 355
  ACCCCTTCATGGTGTGGGCGCAGGCTGCGCGCAGGAAGCTGGCAGACCAGTACCCGCATC 689
   ATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCAAGATGGCCCAGGAGAACCCCCAAGA 208
   CCATGCCCGTGCGCGTCAACGGCTCCAGCAAGAACAAGCCACACGTCAAGCGACCCATGA 629
   TGCACAACGCGGAGCTCAGCAAGACTCTGGGCAAGCTCTGGAGGCTGCTGAACGAGAGCG
  TGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCGAGTGGAAACTTTTGTCGGAGACGG
  New York
   Rabin, Daniel
   USA
  Conservative
   516-742-4366
  Apple Macintosh
  linear
  516-742-4343
                              UMBER: US 07/441,703
04-DEC-1989
  14-JUN-1991
   25.9%;
67.8%;
   System 7.5
   10
  US 07/715,181
US 07/312,543
   US/08/239,276
  18:
  0;
  Score 129.4; DB 4
Pred. No. 3.1e-20;
  Mismatches
   1.4 Mb storage
   DB 4;
  86;
   Length 2249;
  Indels
  0;
   Gaps
   809
  328
   749
   268
```

FILING DATE: 17-FEB-1989 ATTORNEY/AGENT INFORMATION:

Kurt G. Briscoe

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TYPE: nucleic acid
STRANDENESS: single
TOPOLOGY: linear
US-08-239-276-6
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  Qy
  망
  US-08-468-579B-6
   Matches
   Query Match
  Sequence 6, Application US/08468579B Patent No. 5981700
   TELEFAX: (914) 332-1844 INFORMATION FOR SEQ ID NO:
  GENERAL INFORMATION:
   REGISTRATION NUMBER: 33,141
REFERENCE/DOCKET NUMBER: MDI 251.4-KGB
TELECOMMUNICATION INFORMATION:
TELEPHONE: (914) 332-1700
  1015 CCACATCAAGAGGCCCATGAACGCCTTCATGGTGTGGGCCAAGGATGAGCGGAGGAAGAT 1074
  STREET: 000
CITY: Tarrytown
CTATE: New York
CTATE: NEW YORK
  NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
  TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING
  1255 CGTGGAG 1261
                                CLASSIFICATION: 530
PAPPLICATION DATA:
PAPPLICATION NUMBER: US 08/239,276
FILING DATE: 05-MAX-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/872,646
EXECUTION NUMBER: US 07/872,646
  COMPUTER: Apple Macintosh
OPERATING SYSTEM: System
SOFTWARE: WORDERFECT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08
  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette,
  APPLICANT:
  189 GGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCCGCGAGTG 248
   129 CCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCAAGAT 188
PRIOR APPLICATION DATA:
   Match 20.0%;
Local Similarity 62.8%;
es 155; Conservative
  FILING DATE:
  ADDRESSEE:
  GAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGC 308
  CATGAAG 375
  GCAGCACCTGGAGAAGTATCCTGACTACAAGTACAAGCCGCGCCCCAAGCGCACCTGCAT 1254
  GCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCGGCGGAAAAACCAAGACGCT 368
  GAAGTCCATGACCAACCAGGAGAAGCAGCCCTACTATGAGGAACAGGCGCGGCTGAGCCG 1194
  CCTGCAAGCCTTCCCAGACATGCACAACTCCAGCATCAGCAAGATCCTTGGATCTCGCTG 1134
  10591-5144
  E: Sprung Kramer Schaefer & Briscoe 660 White Plains Road
  Rabin, Daniel
  06-JUN-1995
                      08-JUN-1992
  System 7.5
  US/08/468,579B
   6:
  3.50 inch, 1.4 Mb storage
   0;
   Score 99.8;
Pred. No. 1e
   Mismatches
   8; DB 2;
1e-13;
   92;
   Length 3243;
   Indels
   0
   Gaps
   0;
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   US-08-468-577B-6
  US-08-468-579B-6
   Sequence 6, Application US/08468577B Patent No. 6001804 GENERAL INFORMATION:
  Matches
  Query Match
   TELEFAX: (914) 332-1844
INFORMATION FOR SEQ ID NO: 6:
   APPLICATION NUMBER: US 07/
FILING DATE: 04-DEC-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
FILING DATE: 17-FEB-1989
ATTORNEY_AGENT INFORMATION:
NAME: Kurt G. Briscoe
  1015 CCACATCAAGAGGCCCATGAACGCCTTCATGGTGTGGGCCAAGGATGAGCGGAAGAAGAT 1074
  SEQUENCE CHARACTERISTICS:
   REFERENCE/DOCKET NUMBER: MD TELECOMMUNICATION INFORMATION: TELEPHONE: (914) 332-1700
   PRIOR APPLICATION DATA:
   1075 CCTGCAAGCCTTCCCAGACATGCACAACTCCAGCATCAGCAAGATCCTTGGATCTCGCTG 1134
  NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
  TITLE OF INVENTION:
   1255 CGTGGAG 1261
  SOFTWARE: WordPerfect CURRENT APPLICATION DATA:
  ZIP: 10591-5144
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch,
  129
  APPLICANT:
  309 GCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACCCAAGACGCT 368
   249 GAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGC 308
   369 CATGAAG 375
  TYPE: nucleic acid STRANDEDNESS: sing TOPOLOGY: linear
   APPLICATION NUMBER: FILING DATE: 14-JUN
  REGISTRATION NUMBER:
  COMPUTER: Apple Macintosh
OPERATING SYSTEM: System 7.5
SOFTWARE: WordPerfect
  STREET: 660 Whit
CITY: Tarrytown
STATE: New York
  Local Similarity es 155; Conser
            APPLICATION NUMBER: US/08/468,577B FILING DATE: 06-JUN-1995
CLASSIFICATION:
  COUNTRY:
  ADDRESSEE:
  ENGTH:
   GGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCGAGTG 248
  CCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGCTCCCGCGGGCAGCGGCAGCGCCAAGAT 188
   3243 nucleotides
  E: Sprung Kramer Schaefer & Briscoe 660 White Plains Road
  USA
  Rabin,
  Conservative
   14-JUN-1991
  single
  Daniel
  PANCREATIC ISLET CELL ANTIGENS OBTAINED BY MOLECULAR CLONING
  20.0%;
   US 07/715,181
   US 07/441,703
   US 07/312,543
   33,141
  0,
  MDI 251.5-KGB
  Score 99.8; DB 2;
Pred. No. 1e-13;
0; Mismatches 92;
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  Length 3243;
   Indels
   0
   Gaps
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FILING DATE: 05-MAY-PRIOR APPLICATION DATA:

05-MAY-1994

us 08/239,276

US 07/872,646

PRIOR APPLICATION DATA:

APPLICATION NUMBER:

```
RESULT 10
US-08-239-276-2
  Qy
   밁
   QΥ
  밁
  Qγ
   Дb
   Qy
  В
   Sequence 2, Application US/0
Patent No. 5840836
GENERAL INFORMATION:
APPLICANT: Rabin, Daniel
   Matches 155;
  Query Match
  TELEPHONE: (914) 332-1700
TELEFAX: (914) 332-1844
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 3243 nucleotides
  TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING NUMBER OF SEQUENCES: 10
   COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
   CORRESPONDENCE ADDRESS:
   1255 CGTGGAG 1261
  1075
  TELECOMMUNICATION INFORMATION:
  ATTORNEY/AGENT INFORMATION:
NAME: Kurt G. Briscoe
REGISTRATION NUMBER: 33,
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/312,543
FILING DATE: 17-FEB-1989
   189 GGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGGCCTGGGGCGCCGAGTG 248
   249
   PRIOR APPLICATION DATA:
  PRIOR APPLICATION DATA:
   COUNTRY:
   STREET:
  ADDRESSEE:
  Local Similarity
  TYPE: nucleic acid
STRANDEDNESS: single
   APPLICATION NUMBER: FILING DATE: 04-DEC
  FILING DATE:
   APPLICATION NUMBER:
  APPLICATION NUMBER: FILING DATE: 08-JU
   TOPOLOGY:
  CATGAAG 375
  GAAGTCCATGACCAACCAGGAGAAGCAGCCCTACTATGAGGAACAGGCGCGGCTGAGCCG
   GAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGC 308
  CCTGCAAGCCTTCCCAGACATGCACAACTCCAGCATCAGCAAGATCCTTGGATCTCGCTG 1134
   GCAGCACCTGGAGAAGTATCCTGACTACAAGTACAAGCCGCGGCCCAAGCGCACCTGCAT 1254
   GCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACCCAAGACGCT 368
                                    10591-5144
  Tarrytown : New York
   Application US/08239276
   E: Sprung Kramer
660 White Plains
   USA
   Conservative
   linear
   Diskette,
   UMBER: US 07/441,703
04-DEC-1989
  08-JUN-1992
  14-JUN-1991
  20.0%;
   US 07/715,181
  33,141
3.50 inch,
  Schaefer & Briscoe
   0,
   MDI 251.8-KGB
   Score 99.8; DB
Pred. No. 1e-13;
   Mismatches
1.4 Mb storage
  DB 3;
  92;
  Length 3243;
  Indels
  0;
  0;
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RESULT 11
US-08-468-579B-2
  Q
   밁
  Qy
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   QΥ
   DЬ
   δÃ
   Sequence 2, Application US/08468579B
Patent No. 5981700
GENERAL INFORMATION:
APPLICANT: Rabin, Daniel
APPLICANT: Rabin, Daniel
TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS
TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING
  Query Match 17.9%;
Best Local Similarity 60.2%;
Matches 147; Conservative
   TELEFAX: (914) 332-1844 INFORMATION FOR SEQ ID NO:
  CORRESPONDENCE ADDRESS:
  NUMBER OF SEQUENCES:
   2040 CNCA 2043
   SEQUENCE CHARACTERISTICS:
LENGTH: 5051 nucleotic
  REFERENCE/DOCKET NUMBER: MD
TELECOMMUNICATION INFORMATION:
TELEPHONE: (914) 332-1700
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/312,543
FILING DATE: 17-FEB-1989
ATTORNEY/AGENT INFORMATION:
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 04-DEC-1989
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/872,646
FILING DATE: 08-JUN-1992
PRIOR APPLICATION DATA:
   358 ACCA 361
   178
   CURRENT APPLICATION DATA:
                                   STREET:
  ADDRESSEE:
   TYPE: nucleic
STRANDEDNESS:
  TOPOLOGY:
  NAME: Kurt G. Briscoe
REGISTRATION NUMBER: :
   APPLICATION NUMBER: US 07/715,181 FILING DATE: 14-JUN-1991
   CLASSIFICATION:
  FILING DATE:
  SOFTWARE:
  COMPUTER: Apple Macintosh
OPERATING SYSTEM: System 7.5
   APPLICATION NUMBER:
  CGGCTGCGAGCGCTGCACATGAAGGAGCACCCGGGATTATAAATACCGGCCCCGGCGGGAAA 357
  CGGCGCAAGATGGCCCAAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTG 237
  GGATCTCGCTGGAAATCAATGTCCAACCAGGAGAAGCAACCTTATTATGAAGAGCAGGCC 1979
   GGCGCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAG
   AGGAGAAAATCCTTCAGGCCTTCCCCGACATGCATAACTCCAACATTAGCAAAATCTTA 1919
Tarrytown : New York
   nucleic acid
                                  E: Sprung Kramer Schaefer & Briscoe
660 White Plains Road
   5051 nucleotides
  linear
   05-MAY-1994
   single
  19
  US 07/441,703
   us/08/239,276
  33,141
   2:
  IUM
  Score 89.4;
Pred. No. 2
  Mismatches
  251.4-KGB
  2e-11;
   DB 2;
  97;
  Length 5051;
  Indels
  0
  Gaps
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COUNTRY:

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  US-08-468-577B-2
  US-08-468-579B-2
   RESULT 12
Sequence 2, Application US/08468577B
Patent No. 6001804
GENERAL INFORMATION:
APPLICANT: Rabin, Daniel
TITLE OF INVENTION: PANCREATIC I
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/441,703
FILING DATE: 04-DEC-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/312,543
FILING DATE: 17-FEB-1989
ATTORNEY/AGENT INFORMATION:
NAME: KUTT G. BRISCOE
  Matches
   Query Match
   TELEFAX: (914) 332-1844 INFORMATION FOR SEQ ID NO:
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LENGTH: 5051 nucleotides
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APPLICATION NUMBER: US 0
FILING DATE: 08-JUN-1992
  SOFTWARE: WordPerfect CURRENT APPLICATION DATA:
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   TELECOMMUNICATION INFORMATION: TELEPHONE: (914) 332-1700
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 14-JUN-
   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/239,276
FILING DATE: 05-MAY-1994
   COMPUTER READABLE FORM:
  2040 CNCA 2043
   1860 AGGAGAAAAATCCTTCAGGCCTTCCCCGACATGCATAACTCCAACATTAGCAAAAATCTTA 1919
  178
  298
  238 GGCGCCGAGTGGAAACTTTTGTCGGAGACGGAGAGGGGCCGTTCATCGACGAGGCTAAG 297
  358 ACCA 361
   APPLICATION NUMBER: FILING DATE: 06-JUI
  COMPUTER: Apple Macintosh
OPERATING SYSTEM: System
   MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
  REGISTRATION NUMBER: 33,141
REFERENCE/DOCKET NUMBER: MDI
  CLASSIFICATION:
  Match 17.9%;
Local Similarity 60.2%;
les 147; Conservative
  TOPOLOGY:
   STRANDEDNESS:
   CGGCTGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAA 357
   GGATCTCGCTGGAAATCAATGTCCAACCAGGAGAAGCAACCTTATTATGAAGAGCAGGCC 1979
  CGGCGCAAGATGGCCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTG 237
   10591-5144
  nucleic acid
  linear
  υπακ: US/08/468,579B
O6-JUN-1995
   14-JUN-1991
   single
  System 7.5
   PANCREATIC ISLET CELL ANTIGENS
  US 07/715,181
  US 07/872,646
   2
  Score 89.4; DB Pred. No. 2e-11; 0; Mismatches
   251.5-KGB
   DB 2;
  97;
   Length 5051;
  Indels
  0;
  Gaps
  0;
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   QY
   Qy
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   밁
   20
   Вb
   Qγ
  US-08-468-577B-2
  Query Match
Best Local Similarity
Matches 147; Conserv
   TELEFAX: (914) 332-184
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
   1920
  REFERENCE/DOCKET NUMBER: MD
TELECOMMUNICATION INFORMATION:
TELECHONE: (914) 332-1700
   ATTORNEY/AGENT INFORMATION:
NAME: Kurt G. Briscoe
REGISTRATION NUMBER: 33,
  SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 06-JUN-199
  PRIOR APPLICATION DATA: APPLICATION NUMBER:
  CLASSIFICATION: 514
PRIOR APPLICATION DATA:
   COMPUTER READABLE FORM:
  CORRESPONDENCE ADDRESS:
   1980
   1800 AGCAGCGAGCCACACATTAAGCGACCAATGAATGCATTCATGGTTTTGGGCAAAGGATGAG 1859
  PRIOR APPLICATION DATA:
   NUMBER OF SEQUENCES:
   PRIOR APPLICATION DATA:
  PRIOR APPLICATION DATA:
   TITLE OF INVENTION:
2040 CNCA 2043
   238
  178 CGGCGCAAGATGGCCCAAGGAGAACCCCCAAGATGCACTCGGAGGATCAGCAAGCGCCTG 237
  118 AACAGCCCGGACCGGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAG 177
                                358 ACCA 361
  CITY: Tarrytown
STATE: New York
  APPLICATION NUMBER: FILING DATE: 08-JUN
   APPLICATION NUMBER: US 0 FILING DATE: 05-MAY-1994
  COMPUTER: Apple Macintosh
OPERATING SYSTEM: System
  STREET:
  APPLICATION NUMBER: US 07 FILING DATE: 04-DEC-1989
   FILING DATE:
  MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb
   COUNTRY:
   ADDRESSEE:
  STRANDEDNESS:
   TYPE: nucleic acid
  APPLICATION NUMBER:
   TOPOLOGY:
  LENGTH: 5051 nucleotides
   AGGAGAAAAATCCTTCAGGCCTTCCCCGACATGCATAACTCCAACATTAGCAAAATCTTA 1919
   CGGCTGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAA 357
   GGATCTCGCTGGAAATCAATGTCCAACCAGGAGAAGCAACCTTATTATGAAGAGCAGGCC 1979
   GGCGCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAG 297
  10591-5144
  E: Sprung Kramer Schaefer & 660 White Plains Road
   USA
  Conservative
   linear
  IUMBER: US 07/872,646
08-JUN-1992
  UMBER: US/08/468,577B
O6-JUN-1995
  UMBER: US 07/312,543
17-FEB-1989
   14-JUN-1991
  single
   17.9%;
  OBTAINED BY MOLECULAR CLONING 19
  System 7.5
   1844
  US 07/715,181
   US 08/239,276
   US 07/441,703
  Score 89.4; DB 3;
Pred. No. 2e-11;
0; Mismatches 97;
   MDI 251.8-KGB
   2e-11;
~hes 97; Indels
  storage
  Length 5051;
  0;
  Gaps
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   RESULT 13
US-08-239-276-5
  us-08-239-276-5
   Sequence 5, Application US/08239276
Patent No. 5840836
GENERAL INFORMATION:
APPLICANT: Rabin, Daniel
   Query Match
Best Local Similarity
  Matches
   INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 1570 nucleotides
   APPLICATION NUMBER: US 07/715,181
FILING DATE: 14-JUN-1991
PRIOR APPLICATION DATA:
  FILING DATE: 05-MAY-1
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
  SOFTWARE: WordPerfect CURRENT APPLICATION DATA:
   ATTORNEY/AGENT INFORMATION:
  FILING DATE: 04-DEC-PRIOR APPLICATION DATA:
  COMPUTER READABLE FORM: MEDIUM TYPE: Diskette,
   NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
   TITLE OF INVENTION: PANCREATIC ISLET CELL ANTIGENS TITLE OF INVENTION: OBTAINED BY MOLECULAR CLONING
   TELEPHONE: (914) 332-1700
  PRIOR APPLICATION DATA:
                    309 GCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGC 352
   129 CCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCCGCGGGCAGCGCGCAAGAT 188
342 TCATCACCTGGAGAAGTATCCTGACTACAAGTACAAGCCGCGGC 385
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  NAME: Kurt G. Briscoe
REGISTRATION NUMBER:
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660 White Plains Road
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  APPLICANT: Rabin, Daniel TITLE OF INVENTION: PANCE TITLE OF INVENTION: OBTA
   FILING DATE: 17-FEB-1989
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   141;
  Tarrytown
   nucleic acid
  10591-5144
Kurt G. Briscoe
   New York
   1570 nucleotides
  E: Sprung Kramer Schaeter & Briscoe 660 White Plains Road
   USA
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  NUMBER: US 07/715,181
14-JUN-1991
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, NO: 5:
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  16.2%;
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FILING DATE: 06-JUN-1995

PRIOR APPLICATION DATA:
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FILING DATE: 04-DEC-1989
PRIOR APPLICATION NUMBER: US 07/441,703
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PRIOR APPLICATION NUMBER: US 07/312,543
FILING DATE: 07-FEB-1989
ATTORNEY/AGENT INFORMATION:
NAME: KUIT G. BRISCOE

REFITERATION NUMBER: US 07/312,543
FILING DATE: 07-FEB-1989
ATTORNEY/AGENT INFORMATION:
NAME: KUIT G. BRISCOE

REFITERATION SIMMERER: US 07/312,543
  GENERAL INFORMATION: APPLICANT: Rabin,
   TELEFAX: (914) 332-1844
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 1570 nucleotides
   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4 Mb storage
COMPUTER: Apple Macintosh
OPERATING SYSTEM: System 7.5
   REGISTRATION NUMBER: 33,141
REFERENCE/DOCKI NUMBER: MDI
TELECOMMUNICATION INFORMATION:
TELEPHONE: (914) 332-1700
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Search completed: October 10, 2002, 17:33:01 Job time: 31.7333 secs

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1 (bases 1 to 580)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index (Dispissed (1998))

Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
  CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Bonaldo, Ph.D.

CDNA Library Arrayed by: Greg Lennon, Ph.D.

CDNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL, send email to: info@image.llnl.gov

Seq primer: -40UP from Gibco
High quality sequence stop: 505.
Location/Qualifiers
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1 (Dases 1 to 694)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc
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RESULT 2 B1917204

VERSION

SOURCE KEYWORDS

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cDNA Library Preparation: Life Technologies, Inc.

DEFINITION LOCUS

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1 (Dases I to 509)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP,BTGAP), Tumor Gene Index
  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
  EST
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  CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution
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   Contact: Robert Strausberg, Ph.D.
   cDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
Sonaldo, Ph.D.
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1 (bases 1 to 537)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project
  Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
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Location/Qualifiers
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DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
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  CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
  124
Conservative
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by Bento
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  В
  Ф
  ДЬ
   δÃ
   밁
   COMMENT
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  cDNA Library Preparation: M. Bento Soares, Ph.D. CDNA Library Arrayed by: Greg Lennon, Ph.D. DAM Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Burt Feuerstein, M.D., Mark Israel, M.D.
  Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index Unpublished (1998)
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
  Possible reversed clone: polyT not found
  www-bio.llnl.gov/bbrp/image/image.html
  Contact: Robert Strausberg, Ph.D.
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   δÃ
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Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
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   wr06a10.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2480730 3' similar to gb:X71136 SOX-10 PROTEIN (HUMAN); mRNA sequence.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher A. Moskaluk, M.
   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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  CDNA Library Arrayed by: Greg Lennon, Ph.D.

DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/ILNL at:
www-bio.llnl.gov/bbrp/image/image.html
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   R. Emmert-Buck, M.D., Ph.D.
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subtraction by Bento Soares and M. Fatima Bonaldo. "
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В

Š В δÃ ₽ Š В Ş ₽ 80 В δ 밁 Qy 밁

밁

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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
   Email: cgapbs-r@mail.nih.gov
CDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library
Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
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Seq primer: -40RP from Gibco
High quality sequence stop: 518.
  Contact: Robert Strausberg, Ph.D.
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insert size 1.8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-CDNA synthesis kit
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DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL, send email to:
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  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher A. Moskaluk, M.D.,
  Contact: Robert Strausberg, Ph.D.
   Unpublished (1997)
   Tumor Gene Index
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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1 (bases 1 to 507)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index
Unpublished (1998)
   www-bio.llnl.gov/bbrp/image/image.html
Insert Length: 1184 Std Error: 0.00
Seg primer: -400P from Gibco
  tn44e04.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2170494 3' similar to 9b:X71136 SOX-10 PROTEIN (HUMAN); contains TAR1.t2 TAR1 repetitive element; mRNA sequence.
  CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution
found through the I.M.A.G.E. Consortium/LLNL at:
   cDNA Library Preparation: M. Bento Soares, Ph.D., Bonaldo, Ph.D.
   Email: Cgapbs-r@mail.nih.gov
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
   Contact: Robert Strausberg, Ph.D.
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              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 537)

NCI/NINDS-GAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project
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QY 밁 Q В Qy 밁 Š В Š 밁 Q 뫄 Ωy 멂 Ş B 2

SOURCE

VERSION

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COMMENT
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  Unpublished (1998)
Contact: Robert Strausberg, Ph.D.
  DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
   cDNA Library Preparation: M. Bento Soares, Ph.D., Bonaldo, Ph.D.
   High quality sequence stop: 459.
   Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld
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1 (bases 1 to 965)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index (DISORDER), Tumor Gene Index (DISORDER)
   AI356682

965 bp mRNA linear EST 15-FEB-1999
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similar to gb:X71136 SOX-10 PROTEIN (HUMAN);, mRNA sequence.
  Bonaldo,
  Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
  Homo sapiens
  AI356682.1 GI:4108303
  CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome
Clone distribution: NCI-CGAP clone distribution
found through the I.M.A.G.E. Consortium/LLNL at:
   Email: cgapbs-r@mail.nih.gov
  www-bio.lln1.gov/bbrp/image/image.html
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  cDNA Library Preparation: M. Bento Soares, Ph.D.,
   primer: -40UP from Gibco
  tact: Robert Strausberg, Ph.D.
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   1.
   Gaps
  146
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TITLE
  JOURNAL COMMENT
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SOURCE
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AW055151
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   CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima Bonaldo, Ph.D.
Bonaldo, Ph.D.
CDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
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1 (bases 1 to 607)

NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurological Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index (CGAP/BTGAP), Tumor Gene Index (CGAP/BTGAP), Tumor Gene Index (CGAP/BTGAP), Tumor Gene Index (Doublished (1998)
Contact: Robert Strausberg, Ph.D.
Email: Cgapbs-remail.nih.gov
   AW055151 607 bp mRNA linear EST 09-MAR-2000 wz01d08.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2556783 3'ssimilar to gb:X71136 SOX-10 PROTEIN (HUMAN);, mRNA sequence.
   Seq primer: -40UP from Gibco
High quality sequence stop: 501.
Location/Qualifiers
  Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
  AW055151.1 GI:5920854
adaptors (Pharmacia), digested with Not I the Not I and Eco RI sites of the modified Library is normalized, and was constructed Soares and M.Fatima Bonaldo."

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NCI/NINDS-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute / National Institute of Neurolo Disorders and Stroke, Brain Tumor Genome Anatomy Project (CGAP/BTGAP), Tumor Gene Index Unpublished (1998)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
  AW028031 485 bp mRNA linear EST 08-MAR-2000 ws63a01.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2501832 3'similar to gb:X71136 SOX-10 PROTEIN (HUMAN);, mRNA sequence.
Tissue Procurement: David N. Louis, M.D., Myrna R. Rosenfeld M.D.,
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DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: WCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
  cDNA Library Preparation: M. Bento Soares, Ph.D.,
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  THE DESCRIPTION OF THE PRINCIPLE OF THE PRINCIPLE OF THE PRINCIPLE OF THE PRINCIPLE OF THE PRINCIPLE OF THE PRINCIPLE OF THE PROPERTY OF THE PRINCIPLE OF THE P
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   cDNA Library Preparation: M. Bento Soares, Ph.D.
cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
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  Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Emmert-Buck, M.D., Ph.D.
  Contact: Robert Strausberg, Ph.D.
   Unpublished (1997)
   Tumor Gene Index
  NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
  Similarity
   110 a
   Conservative
  quality sequence stop: 485
   cgapbs-r@mail.nih.gov
   /note-"organ: lung; Vector: pT/T3D-Pac (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from pooled lung tumor tissue, and was then primed with a Not 1 oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT/T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M. Fatima Bonaldo. "
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BE792833.1 GI:10214031
EST:
   Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
   Homo sapiens
  BE792833 740 bp mRNA linear EST 20-SEP-2000 601584834F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3939033 5',
   Unpublished (1999)
  NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health, N
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 740)
   mRNA sequence.
   Contact: Robert Strausberg, Ph.D.
   Similarity
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   Conservative
  /note="Organ: lung; Vector: pOTB); Site_1: XhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies)." a Stratagene) and Superscript II RT (Life Technologies)."
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| Searc<br>Job t                                                      | Db  | Qy                                                   | Вb  | Qy                                                                | Ъ   | Qy                                                               | В   | Qy                                                                  | Db                                                                   |
|---------------------------------------------------------------------|-----|------------------------------------------------------|-----|-------------------------------------------------------------------|-----|------------------------------------------------------------------|-----|---------------------------------------------------------------------|----------------------------------------------------------------------|
| h cc<br>ime                                                         | 421 | 454                                                  | 361 | 394                                                               | 301 | 334                                                              | 241 | 274                                                                 | 181                                                                  |
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Minimum DB
Maximum DB
  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
  Total number of hits satisfying chosen parameters:
  Scoring table:
   Run
   Perfect score:
   OM nucleic - nucleic search, using sw model
   Result
   NO.
   0
1:
  pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  500
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432.8
   Score
   seq length: 0 seq length: 2000000000
  Query
Match
   October 10, 2002, 12:39:37; Search time 84.9333 Seconds (without alignments) 10107.424 Million cell updates/sec
   IDENTITY_NUC Gapop 10.0 , Gapext 1.0
  1736436 segs, 858457221 residues
   US-09-489-101A-3_COPY_1_500
       100
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| SIDS1/gcgdata/hold-geneseq/geneseqn-embl/NA1981.DAT:*
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6: //SIDS1/gcgdata/hold-geneseq/geneseqn-embl/NA2001B.DAT: *
  cacagegeeegeatgtacaa.....atggacagttacgegeacat 500
  GenCore version 5.1.3
Copyright (c) 1993 ~ 2002 Compugen Ltd.
  Length
  1085
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   DΒ
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   AAK52284
AAK53372
ABI99318
AAS61666
   AAD11110
AAK52388
AAK53268
  AX16151
  SUMMARIES
                             Human polynucleoti
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  Description
   Human small cell l
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(LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CANCER RES. (CORR ) CORNELL RES FOUND INC.
  AAD11110;
  21-JAN-2000;
  26-JUL-2001.
  WO200153349-A2
   Homo sapiens
   24-SEP-2001
```

| Bovine testicle de | AAT03988 | 16 | 317   |      |       | 45     |
|--------------------|----------|----|-------|------|-------|--------|
| œ                  | AAT51617 | 18 | 1588  |      | •     | 44     |
| Fish protamine gen | AAQ87042 | 16 | 2762  |      | •     | 43     |
| Drosophila melanog | ABL05610 | 23 | 7108  |      | 115.2 | 42     |
| Human cervical can | AAH72650 | 22 | 4467  |      | •     | 41     |
| PKS 741 insert con | AAQ20685 | 13 | 14704 |      | •     | 40     |
| Mouse SRY-related  | AAT33007 | 17 | 10266 |      | 117.4 | 39     |
|                    | AAQ20681 | 13 | 471   |      | 117.4 | 38     |
| Drosophila melanog | ABL05611 | 23 | 2310  |      | 117.6 | 37     |
|                    | AB199688 | 24 | 2215  | •    | 119   | 3<br>6 |
| e VGT24 of a       | AAC61724 | 21 | 2033  |      | 120.6 | 35     |
| Lung small cell ca | AAS61805 | 24 | 441   |      | 121.4 | 34     |
| Mouse ischaemic co | ABI99491 | 24 | 2069  | •    | 127.4 | 33     |
|                    | AAQ94812 | 16 | 1667  |      | 128.2 | 32     |
| SOX4 coding sequen | AAT59844 | 18 | 1422  |      | 128.6 | 31     |
| Rabbit mt-box. Or  | AAQ20680 | 13 | 996   |      | 134.2 | 30     |
| Bovine SRY-related | AAT33008 | 17 | 2840  | •    | 134.6 | 29     |
| $\alpha$           | AAQ94813 | 16 | 1661  | •    | 134.6 | 28     |
| Bovine sex-determi | AAQ94811 | 16 | 1661  | •    | 134.6 | 27     |
|                    | AAQ94814 | 16 | 1661  |      | 134.6 | 26     |
| pr53.3 (NCIMB 4030 | AAQ20684 | 13 | 2151  | •    | 138.4 | 25     |
| S                  | AAT30308 | 17 | 2514  |      | 140   | 24     |
| Human gastric canc | AAF22715 | 22 | 744   |      | 140   | 23     |
| DNA encoding novel | AAS87736 | 23 | 434   | •    | 140.8 | 22     |
| Human SOX-9 cDNA.  | AAT30309 | 17 | 3934  | •    | 143.2 | 21     |
|                    | AAH16401 | 22 | 1788  |      | 150.8 | 20     |
|                    | ABL18480 | 23 | 4298  | •    | 193.4 | 19     |
| Drosophila melanog | ABL18481 | 23 | 2298  | ٠    | 193.4 | 18     |
| DNA encoding novel | AAS87779 | 23 | 1969  | •    | 199   | 17     |
| Degenerate human S | ŲΠ       | 20 | 1161  |      | 209.2 | 16     |
| Lung small cell ca | AAS61625 | 24 | 412   | •    | 217.8 | 15     |
| DNA encoding novel | ω        | 23 | 37    | •    | 220   | 14     |
| Human small cell l | AAD11119 | 22 | 37    | •    | 225   | 13     |
| cell               | AAD11118 | 22 | 50    | •    | 234.8 | 12     |
| Mouse Sox1 cDNA.   | $\vdash$ | 20 | 2376  | 52.3 | 261.4 | 11     |
| Chicken Sox1 cDNA. | AAX16152 | 20 | 31    | •    | 266.2 | 10     |
|                    |          |    |       |      |       |        |

## ALIGNMENTS

Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer; leimyosarcoma; synovial sarcoma; cytostatic; SOX2; ds. AAD11110 standard; DNA; 1085 BP 19-JAN-2001; 2001WO-US02015 Human small cell lung cancer associated gene, SOX2 2000US-0489101. (first entry) Location/Qualifiers 13..966 /\*tag= a /product= "Human SOX2 protein"

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RESULT 2
AAK52388
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   В
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  Matches
  Query Match
  The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group I molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head the present sequence is a small cell lung cancer associated gene designated as NY-SCLC-1, encoding human SOX2 protein.
            AAK52388 standard; cDNA; 1087 BP
   Claim 57; Page 87; 152pp; English.
   Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by isolated nucleic acid comprising an NA Group 3 or 4 molecule -
   Sequence 1085 BP; 253 A; 348 C; 348 G; 136 T; 0 other;
   481
  421
  181
  301
   241
  241
   181
   121
  61
  61
  Local
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  AATAGCATGGCGAGCGGGGTCGGGGTGGGCGCCGGCCTGGGCGCGCGGGCGTGAACCAGCGC
   CGCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGC
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  AAGACGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCGGCTGCTGGCCCCCCGGCGGC
   CTGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACC
   GCCGAGTGGAAACTTTTGTCGGAGACGGAGAGGCGGCCGTTCATCGACGAGGCTAAGCGG
   AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGTGGTCCCGCGGGCAGCGG
   ATGGACAGTTACGCGCACAT 500
   AATAGCATGGCGAGCGGGGTCGGGGTGGGGCGCGCGGGCGTGAACCAGCGC
   AAGACGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGGCTGCTGGCCCCCGGCGGC
  GCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGG
  CGCAAGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGC
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  500;
   2001-457597/49.
   AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGG
  AAE05810.
  Similarity
  100.0%; ilarity 100.0%; Conservative (
   Scanlan
  MJ,
  500
   Jager D,
  0;
   Score 500; DB 22; Pred. No. 7.6e-95;
   Mismatches
   Old LJ,
   Gure AO,
   0;
  Indels
   Length 1085;
   Chen
  0;
   K
   Gaps
  480
   360
   300
   180
  120
  60
   420
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  360
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  240
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  0;
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                                  В
   Qy
  Дb
   γΩ
   Query Match
Best Local
  Matches
   03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
  01-SEP-2000;
15-SEP-2000;
20-OCT-2000;
  Zhao
   Homo sapiens.
  30-NOV-2000;
  09-AUG-2001.
  06-NOV-2001
   AAK52388;
   (HYSE-) HYSEQ INC.
  WO200157190-A2
            121
   .nflammation.
   ΑJ,
            AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGG
  2001-476283/51.
500;
   AAM79255
   Similarity
  Liu C,
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The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopolesis regulating activity, tissue growth factor activity, immunomodulatory activity and activin/inhibin activity and may be useful in the diagnosis and/or
   Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation; ss.
   Sequence 1087 BP; 250 A; 346 C; 357 G; 134 T; 0 other;
   Note: Records for SEQ ID NO 2110 (AAK52581), (AAM80020) are omitted as the relevant pages were missing at the time of publication.
   Claim 1; Page 3064-3066; 6221pp; English.
   05-FEB-2001; 2001WO-US04098
   useful in diagnosis and
  Nucleic acids encoding polypeptides with cytokine-like activities
  Human polynucleotide SEQ ID NO 933
   reatment of cancer, leukaemia, nervous system disorders, arthritis and
   34 CACAGCGCCCGCATGTACAACATGATGGAGACGGAGCTGAAGCCGCCGGGCCCGCAGCAA
  1 CACAGCGCCCGCATGTACAACATGATGGAGAGCGGAGCTGAAGCCGCCGGGCCCGCAGCAA 60
ACTTCGGGGGGGGGGGGGGAACTCCACCGCGGGGGGGGCGGCGGCAACCAGAAAAAAC 120
   Wang D, Wang J, Z
Yang Y, Wejhrman T,
  2000US-0560875.
2000US-0598075.
2000US-0620325.
2000US-0654936.
2000US-0654936.
2000US-06633561.
2000US-0693325.
2000US-0728422.
  Conservative
  (first entry)
  2000US-0496914
   Drmanac RT, Asundi V, Zhou P, Wang J, Zhang J, Ren F, Che Wejhrman T, Goodrich R;
  100.0%;
   gene therapy
  0;
   Score 500; DB 22;
Pred. No. 7.6e-95;
'· wismatches 0;
  2111
from
   Chen
  Length 1087;
   Indels
  (AAK52582) and
the sequence 1
   R, W
   Wang
  Cao
  0;
  Gaps
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   Ma
  153
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  0;
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RESULT 3
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   03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
01-SEP-2000;
15-SEP-2000;
20-OCT-2000;
  Tang YT,
Zhao QA,
Xue AJ,
       Claim 1;
   05-FEB-2001; 2001WO-US04098
   09-AUG-2001.
   WO200157190-A2
  Homo sapiens
  nervous
   Human; cytokine; cell proliferation; cell differentiation; gene th vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia;
  Human polynucleotide SEQ ID
   AAK53268;
  AAK53268 standard; cDNA;
                      (HYSE-)
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   454
  421
  394
  361
  301
  274
   241
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   2001-476283/51
   AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGGTGGTCCCGCGGGCAGCGG
   system disorder; arthritis; inflammation; ss.
   Liu C,
Wang D,
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   HYSEQ INC.
      Page 4995; 6221pp; English
   2000US-0496914.
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2000US-0598075.
2000US-0620325.
2000US-0654936.
2000US-06634936.
2000US-0693325.
2000US-0728422.
   (first entry)
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  Drmanac RT, Asundi V, Wang J, Zhang J, Re Wejhrman T, Goodrich
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  Asundi V,
  Ren
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  Cao Y,
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polynucleotide SEQ ID NO 829.

06-NOV-2001

(first entry)

AAK52284 standard;

cDNA;

Human; cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopolesis; tissue growth factor; hamnonomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation; ss.

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  Qy
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   Qy
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   В
  Qy
  Qy
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  Qy
   Вр
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Вþ
   Matches
  Query Match
Best Local
  The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78333-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, haematopoiesis activity and may be useful in the diagnossis and/or activin/inhibin activity and may be useful in the diagnossis and/or the content of cancer, leukaemia, nervous system disorders, arthritis and increament of cancer, leukaemia, nervous system disorders, arthritis and
   Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
  Sequence 1116 BP; 256 A; 362 C; 362 G; 136 T; 0 other;
   inflammation.
507
                               481
  387
  361
   327
  301
   267
   207
   181
  147
   121
  87
   61
   27
   CACAGCGCCCGCATGTACAACATGATGGAGAGCGGAGCTGAAGCCGCCGGGCCCGCAGCAA 60
ATGGACAGTTACGCGCACAT 526
                               ATGGACAGTTACGCGCACAT 500
  AATAGCATGGCGAGCGGGGTCGGGGTGGGCGCGCGCGGGCGTGAACCAGCGC
   CTGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACC
  CTGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACC
   GCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGG
  GCCGAGTGGAAACTTTTGTCGGAGACGGACAAGCCGCCGTTCATCGACGACGAGGCTAAGCGG
  CGCAAGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGC
  AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGG
   AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGG
  CACAGCGCCCGCATGTACAACATGATGGAGACGGAGCTGAAGCCGCCGGGCCCGCAGCAA
   500;
  Similarity
   Conservative
  100.0%;
   ; Score 500; DB 22;
; Pred. No. 7.7e-95;
0; Mismatches 0;
  Length
  1116;
   0;
   Gaps
   86
  446
  360
   326
   266
   240
   0;
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Qy
  밁
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   멍
  δÃ
  δÃ
   δÃ
                               В
  Qγ
   Ъ
  Вb
   Matches
  Query Match
   19-JUL-2000;
01-SEP-2000;
15-SEP-2000;
  03-FEB-2000;
27-APR-2000;
20-JUN-2000;
  The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, in the diagnostis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and in the diagnostis and treatment of cancer, leukaemia, nervous system disorders, arthritis and
   Sequence 1126 BP;
   Claim 1; Page 2766-2767; 6221pp; English.
  05-FEB-2001; 2001WO-US04098
  WO200157190-A2
   (HYSE-)
  (AAM80020) are omitted
   181
    301
  241
   154
  121
  94
   61
  34
   Local
   1 CACAGCGCCCGCATGTACAACATGATGGAGACGGAGCTGAAGCCGCCGGGGCCCGCAGCAA 60
  QA,
   CTGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAAATACCGGCCCCGGCGGAAAACC
  2001-476283/51.
DB; AAM79151.
   GCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGG
                               GCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGG
  CGCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGC
   CGCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGC
  AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGG
  AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGTCCCCGCGGGCAGCGG 180
  ACTTCGGGGGGGGGGGGCAACTCCACCGCGGCGGCGGCGGCGGCAACCAGAAAAAC
   ACTTCGGGGGGCGGCGGCAACTCCACCGCGGCGGCGGCGGCAACCAGAAAAAC
  Records for SEQ ID NO 2110 (AAK52581), 0020) are omitted as the relevant pages
   500;
  c acids encoding polypeptides with cytokine-like activities
in diagnosis and gene therapy -
   HYSEQ INC.
  Similarity
   Wang D,
Yang Y,
  Liu C,
Wang D,
  2000US-0496914.

2000US-0560875.

2000US-0598075.

2000US-0620325.

2000US-0654936.

2000US-0654936.

2000US-0693325.

2000US-0728422.
   Conservative
  at the time of publication.
  Drmanac RT, Asundi V, Wang J, Zhang J, Ren Wejhrman T, Goodrich R;
   262 A; 361 C; 364 G; 139 T; 0 other;
  100.0%;
   100.0%;
  0,
  Score 500; DB 22; pred. No. 7.7e-95;
   Mismatches
  Zhou
1 F, (
  2111
from
  Chen
  ָּט
  (AAK52582) and 3666
the sequence listin
   Indels
   Length 1126;
  ж,
   u C,
Wang
  Cao
   0;
  Υ,
  listing
  Gaps
   273
   240
  213
  Ma
  0
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  ρy
   Db
   ρ
   DЬ
   vaccine; perti
   03-FEB-2000;
27-APR-2000;
20-JUN-2000;
19-JUL-2000;
01-SEP-2000;
15-SEP-2000;
         The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell polyliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoissis regulating activinty, tissue growth factor activity, haematopoissis resultivity and activinty and may be useful in the diagnostis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
  Tang
Zhao
  vaccine; peptide therapy; stem cell growth factor; haematopoiesis;
tissue growth factor; immunomodulatory; cancer; leukaemia;
nervous system disorder; arthritis; inflammation; ss.
  Human polynucleotide SEQ ID NO 2901.
  Claim 1; Page 5070; 6221pp; English.
   Nucleic acids encoding polypeptides with cytokine-like activities useful in diagnosis and gene therapy -
   P-PSDB; AAM80239
  05-FEB-2001; 2001WO-US04098
   09-AUG-2001
   WO200157190-A2.
  Homo sapiens.
   06-NOV-2001
   AAK53372 standard;
 inflammation
   514
   (HYSE-)
   481
  421
   2001-476283/51.
   ATGGACAGTTACGCGCACAT 533
   ATGGACAGTTACGCGCACAT 500
  AATAGCATGGCGAGCGGGGTCGGGGTGGGCGCGCGCGCGGGCGTGAACCAGCGC
  AATAGCATGGCGAGCGGGGTCGGGGTGGGCGCGGCCGGGCGTGAACCAGCGC
  AAGACGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCGGCTGCTGGCCCCCGGCGGC
   HYSEQ INC.
  Liu C,
Wang D,
Yang Y,
  2000US-0496914
2000US-0560875
2000US-0598075
2000US-0620325
2000US-0620325
2000US-063561
2000US-0633325
   (first entry)
  2000US-0728422
  Drmanac RT, Asundi V, Zhou P, Wang J, Zhang J, Ren F, Che Wejhrman T, Goodrich R;
  cell proliferation; cell differentiation; gene therapy;
  CDNA; 1501 BP
   Chen
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   u C,
   Cao Y,
  elating to
  480
   453
  393
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RESULT 6
AB19918
ID AB19
AC AB19
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   Query Match
Best Local s
Matches 500
  Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
   Sequence 1501 BP; 391 A; 428 C; 450 G; 220 T;
   Mouse ischaemic condition related cDNA sequence SEQ ID NO:179
   07-MAR-2002
   ABI99318 standard; cDNA; 2283
  WO200188188-A2
  vasospastic
   Mouse; ischaemia;
  147
   121
  361
  301
   267
  207
  181
  18-MAY-2000; 2000JP-0145977.
   481
   387
   (UYNI-) UNIV NIHON SCHOOL JURIDICAL PERSON
  87
   61
   27
  AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGG
   GCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCCGCCGTTCATCGACGACGAGGCTAAGCGG
   CGCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGC
  ACTYCGGGGGGCGCGGCAACTCCACCGCGGCGGCGGCCGGCGGCAACCAGAAAAAC 120
  AAGACGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCGGCTGCTGGCCCCCGGCGGC 420
   ATGGACAGTTACGCGCACAT 500
  AAGACGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGCGGCTGCTGGCCCCCGGCGGC
   500;
  Similarity
   Conservative
  ischaemia; ischaemic
   (first entry)
    Asai
  2001WO-JP04192
  compressive ischaemia; occlusive ischaemia; emia; ischaemic condition; ischaemic disease
    Ś
   100.0%; Score 500; DB 22; 100.0%; Pred. No. 7.8e-95;
         Takahashi
  526
   0;
   Mismatches
         Υ,
         Nagata
           H,
  12 other;
  0,
         Ishii
  Indels
  Length
           ĸ
  disease;
  0;
   SS
  Gaps
  180
   146
   206
   506
  48C
   446
  386
   360
  326
   300
   266
   240
  0;
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Qy
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  В
   ρ
  밁
   ρ
  밁
  Qy
   Вþ
  δÃ
   В
   γ
  The present invention describes a method for examining ischaemic conditions, comprising measuring the expression levels of particular genes (I) in a test sample or determining the expression profile of a gene group in the sample comprising genes selected from (I). The method is useful for examining the ischaemic condition (e.g. compressive ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring expression levels of particular genes (AB199202 to AB19912, encoding the protein sequences in ABB57020 to ABB57374) or by determining the expression profile of a gene group comprising these genes. The cused as an indicator when screening for ischaemic condition—improving drugs or therapeutics for ischaemic diseases. AB19913 and AB199914 crepresent PCR primers for a mouse ischaemic condition related sequence, which are used in the exemplification of the present invention.
  Бр
   Qy
  Дb
  В
   Matches
  Query Match
Best Local :
  WPI; 200
P-PSDB;
   Examining the ischemic condition (e.g. occlusive ischemia) by measuring expression levels of particular genes defined in the specification or by determining the expression profile of a gene group comprising these
   Sequence 2283 BP; 597 A; 583 C; 614 G; 488 T; 1 other;
  Claim
  410
   350
   470
  115
  530
830
                     475
   770
  415
  710
  355
   650
  295
   590
  235
   61
  2002-034733/04.
  CAGCGGCGTAAGATGGCCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGC
   468;
  CTGGGCGCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCT
   CAGCGGCGCAAGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGC
   <u>ب</u>
                    CAGCGCATGGACAGTTACGCGCACAT 500
  GGCGGCAATAGCATGGCGAGCGGGGGGTCGGGGTGGGCGCCCGGCCTGGGCGCGGGCGTGAAC
CAGCGCATGGACAGCTACGCGCACAT
   ABB57082
  Similarity
  Page
   Conservative
  518-521; 2690pp; English.
  86.6%;
92.5%;
   0;
  Pred. No.
   Score 432.8;
  Mismatches
   6.6e-81;
  DB 24;
  32;
   Indels
  Length
   6;
  Gaps
  114
   469
   474
  414
  709
   354
   649
   294
   589
   234
  829
   769
```

1;

RESULT 7
AAS61666
ID AAS6

AAS61666 standard;

CDNA;

395

ВP

AAS61666;

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Ş
   g
   20
   В
   δÃ
  Query Match
Best Local S
   21-JUN-2000;
01-SEP-2000;
05-SEP-2000;
14-SEP-2000;
19-DEC-2000;
   determining cancer in a patient. (I), (II) or antigen-presenting cells expressing (II) is useful for stimulating and/or expanding T cells specific for a tumour protein. The method comprises contacting T cells with one of the components under conditions to permit the stimulation and/or expansion of the cells. A composition comprising (I) is useful for stimulating an immune response in a patient and for inhibiting the development of a cancer especially lung cancer in a patient. An isolated T cell population is useful for removing tumour cells from the biological sample and for inhibiting the development of cancer in a patient. AAS61860-AAS61874 represent novel human lung small cell cancer antigen coding sequences of the invention.
  The invention relates to novel isolated lung small cell cancer antigen polynucleotides (I) and polypeptides (II) used in a method of detecting cancer in a patient. The method is optionally performed by utilising oligonucleotides (III), where the biological sample from the patient is contacted with (III), detecting the amount of polynucleotide hybridised to (III) in the sample and comparing the
  Sequence 395 BP; 83 A; 128 C; 144 G; 40 T; 0 other;
   Claim 1; Page 192; 295pp; English.
   Lung tumour polynucleotide and polypeptides diagnosis of cancer especially lung cancer
  WPI; 2002-010896/01
  18-OCT-2001.
  WO200177168-A2
  Homo sapiens
   29-JAN-2002 (first entry)
  amount of polynucleotide to a predetermined cut-off value and thereby
   Lodes MJ,
  (CORI-) CORIXA CORP.
   11-APR-2000;
   11-APR-2001; 2001WO-US11859
   Human; cytostatic; antitumour; lung small cell cancer antigen;
   Lung small cell carcinoma antigen, cDNA #207.
                                 121
   106
  61
  46
   Local Similarity
  1 CACAGCGCCCGCATGTACAACATGATGGAGACGGAGCTGAAGCCGCCGGGCCCGCAGCAA 60
                AGCCCGGACCGCCTCAAGCGGCCCATGAATGCCCTTCATGGTGTGGGTCCCGCGGGCAGCGG 180
   AGCCCGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGG
   Wang T,
  2000US-196780P.
2000US-213361P.
2000US-229763P.
2000US-230629P.
2000US-232565P.
2000US-237037P.
2001US-260796P.
  Conservative
  Mohamath R,
  70.0%;
  0;
   Score 350;
Pred. No.
  Mismatches
  Indirias CY;
  8.1e-64;
  DB 24;
  useful in therapy and
  Length 395;
  Indels
  0,
  Gaps
   165
  0,
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RESULT 8
ANAIGASI
ID ANAIL
XX ANAIL
XX ANAIL
XX ANAIL
XX Huma
XX Huma
XX Huma
XX Homc
XX Homc
XX Homs
FFT CDS
FFT CDS
FFT CDS
FFT CDS
FFT LOV
XX ISO
PM WPI
DR WPI
DR WPI
DR WPI
DR WPI
DR WPI
DR WPI
DR WPI
DR WPI
CC C Com
CC C Com
CC C Cure
CC C Com
CC C C Sel
CC C Sel
CC C Sel
   Д
   Qy
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  Qy
  QY
             population. The method comprises: (a) detecting Sox1 gene expression in the cells; and (b) isolating those cells expressing Sox1. Also described is a method for producing a cell committed to the neuronal lineage, comprising: (a) transfecting a pluripotent stem cell with a genetic construct encoding Sox1 expression; (b) culturing the stem cells to differentiate into neural cells; and (c) isolating those neural cells produced. The present sequence encodes human Sox1. Detection of Sox1 expressing cells is important in diagnosing and treating cancers of the neurological disorders, especially for repair of accidentally induced trauma in the CNS or for correction of congenital or pathological diseases of the CNS. A patient with a neurological disorder can act as self-donor. Cells may be isolated from the patient and either sorted to extract neuroblasts, or treated in order to differentiate neuroblasts,
   Isolating neuroblastic cells from a population - by detecting the expression of the Sox1 gene in the cells and sorting the cells to
  Human; Sox1; neuronal stem cell gene; neuroblastic cell; cancer;
nervous system; neurological disorder; ss.
   Human Sox1 encoding cDNA
   AAX16151;
  AAX16151 standard; cDNA to mRNA; 1542 BP
   A method has been developed for isolating neuroblastic cells from a cell
  Claim 13; Page 45-47; 60pp; English.
   P-PSDB; AAW94461
   (MEDI-) MEDICAL RES COUNCIL
   25-JUN-1998;
  07-JAN-1999.
  WO9900516-A2
   misc_difference
  22-APR-1999
   isolate those cells
  Lovell-Badge R,
   226
  301 CTGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCG 350
  241 GCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCGTTCATCGACGACGAGGCTAAGCGG
  181
  CGCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGC
 specific or general precursors
   1999-095759/08.
   GCCGAGTGGAAACTTTTGTCGGAGACGGAGAAGCCGCCGTTCATCGACGAGGCTAAGCGG
   CGCAAGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGC
  (first entry)
  97GB-0013469
   98WO-GB01862
  /*tag= a
/note= "specifically claimed Sox1 control sequence"
60..1223
  Pevny LH,
   /*tag= b
/product= "Sox1"
  Location/Qualifiers
  /*tag=
   .
60
   expressing Sox1
  Smith A;
   285
  345
  300
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SQX

Sequence 1542 BP;

238 A; 565 C;

560 G; 179 T; 0 other;

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RRESULT 9
AAD11111
XX
AACTIVITY
AACTIVITY
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Matches 327;
  Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer leimyosarcoma; synovial sarcoma; cytostatic; SOX1; ds.
  Human small cell lung cancer associated gene,
  24-SEP-2001
  AAD11111 standard; DNA;
  Homo sapiens
WPI; 2001-457597/49
P-PSDB; AAE05811.
  (LUDW-) LUDWIG INST CANCER RES (SLOK ) SLOAN KETTERING INST CANCELL RES FOUND INC.
   21-JAN-2000; 2000US-0489101.
   19-JAN-2001; 2001WO-US02015.
   WO200153349-A2
   382
  322
   185
  Stockert E,
  502
   425
  305
   245
  262
  CGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA 184
  GCATGGCGAGCGGGGTCGGGGTGGGCGCGGGCGTG 471
  AGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCG
  GCGGCGCGCGTGTGGCCATGGGCGTGGGCGTGGGCGTGGGCGCG
   CGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGCGGGGCGCGCGGCGCGGGTG
   AGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGAGGCCAAGCGGCTGC
   AGTGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGC
   AGGACCGGGTCAAACGCCCATGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCA
   Similarity
   Conservative
  Scanlan
   (first entry)
  Location/Qualifiers 61..1224
   /*tag= a
/product= "Human SOX1 protein'
  /*tag=
  55.8%;
  ŊJ,
  Jager D,
  Score 279; DB 20;
Pred. No. 4.5e-49;
0; Mismatches 80;
   ΒP
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   SOX1.
  Length 1542;
   Indels
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   0;
   Gaps
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  381
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   321
   0;
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RESULT 10
AAX16152
ID AAX16
XX AX16
AC AAX16
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Matches 327
  The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a small cell lung cancer associated gene designated as NY-SCLC-2, encoding human SOX1 protein.
   Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded isolated nucleic acid comprising an NA Group 3 or 4 molecule -
   Sequence 4091 BP; 924 A; 1109 C; 1110 G; 943 T; 5 other;
   Chicken Sox1 cDNA.
   22-APR-1999
   AAX16152 standard; cDNA to mRNA;
   Gallus gallus
   nervous system;
   245 AGTGGAAACTTTTGTCGGAGACGGAGAGGGGGGGCGGTTCATCGACGACGAGGCTAAGCGGCTGC
   143
   503
   323 AGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGAGGCCAAGCGGCTGC
   305 GAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACCAAGA
  65 CGGGGGGCGGCGGCAACTCCACCGCGGCGGCGGCGGCGGCAACCAGAAAAACAGCC 124
   AGATGGCCCAGGAGAACCCCCAAGATGCACCAACTCGGAGATCAGCAAGCGCCTGGGCGCCG
  AGATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGGGCCG
   GCGGCGGCGGCTGTGGCCATGGGCGTGGGCGTGGGCGTGGGCGCG
   GCATGGCGAGCGGGTCGGGGTGGGCGCCGGCCTGGGCGCGGGCGTG
   327;
   Similarity
   Sox1; neuronal stem cell gene; neuroblastic cell; cancer;
system; neurological disorder; ss.
  Page 88-90; 152pp; English.
  Conservative
   (first
   55.8%;
   entry)
   0;
  Score 279; DB 22; Length 4091; Pred. No. 4.7e-49; 0; Mismatches 80; Indels 0
   2312
   ВP
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  Gaps
   262
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  424
   442
  364
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   382
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   A method has been developed for isolating neuroblastic cells from a cell Coppulation. The method comprises: (a) detecting Sox1 gene expression in the cells; and (b) isolating those cells expressing Sox1. Also described is a method for producing a cell committed to the neuronal lineage, comprising: (a) transfecting a pluripotent stem cell with a genetic construct encoding Sox1 expression; (b) culturing the stem cells to differentiate into neural cells; and (c) isolating those neural cells construct encoding Sox1 expression; (b) culturing the stem cells to differentiate into neural cells; and (c) isolating those neural cells construct expressing cells is important in diagnosing and treating cancers of the nervous system. Neural stem cells are useful for the treatment of neurological disorders, especially for repair of accidentally induced trauma in the CNS or for correction of congenital or pathological diseases of the CNS. A patient with a neurological disorder can act as a self-donor. Cells may be isolated from the patient and either sorted to extract neuroblasts, or treated in order to differentiate neuroblasts, or treated in order to differentiate neuroblasts,
  Query Match
Best Local S
Matches 338
  Isolating neuroblastic cells from a population - by detecting the expression of the Sox1 gene in the cells and sorting the cells to isolate those cells expressing Sox1
   Sequence
   Lovell-Badge R,
   (MEDI-) MEDICAL RES COUNCIL
   25-JUN-1997;
  559
  499
  439
  282
   379
   1.62
  102
   222
  42 GCCGCCGGGCCACCAAACTTCGGGGGGGGGGGGGGGGAACTCCACCGCGGCGGCGGC 101
   Local Similarity
CGTCGGCGTGATCCCCGGC
   | CGGCCCCGGCGGAAAACCAAGACGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGG
   CATCGACGAGGCTAAGCGGCTGCGAGCGCTGCACATGAAGGAGCACCCGGATTATAAATA 341
  GATCAGCAAGCGCCTGGGCGCCGAGTGGAAACTTTTTGTCGGAGACGCGGAGAAGCGGCCGTT 281
   CGGCGGCAACCAGAAAAACAGCCCGGACCGGTCAAGCGGCCCATGAATGCCTTCATGGT 161
                                   CGCGGGCGTGAACCAGCGC 480
   GCTGCTGG----GCGCCGGCCGGCCGCCGCCGCCGTCGGCGTGGGCATGGG
   GCTGCTGGCCCCCGGCGCAATAGCATGGCGAGCGGGGTCGGGGTGGGCCCGGCCTGGG 461
   CCGGCCCCGGCGGAAGACCAAGACGCTGCTCAAGAAGGACAAGTACTCGCTGGCCGGAGG
  CATCGACGAGGCGAAGCGGCTGCGGGCGCTGCACATGAAGGAGCACCCGGATTATAAATA
  GATCAGCAAGCGGCTGGGCCCCGAGTGGAAGGTGATGTCGGAGGCCGAGAAGCGGCCTTT
   GTGGTCCCGCGGGCAGCGCGCAAGATGGCCCAAGAACCCCCAAGATGCACAACTCGGA 221
   CGGCGGCGGGCAAAGCGGGGCAGGACCGCGTGAAGCGCCCATGAACGCCTTCATGGT
  2312 BP; 421 A; 739 C; 714 G; 438 T; 0 other;
  Page 41-43;
  Conservative
   97GB-0013469
   98WO-GB01862.
   Pevny LH,
   53.2%;
77.0%;
  60pp; English.
694
   Smith A;
  0;
   Score 266.2; DB Pred. No. 2e-46;
  Mismatches
  DB 20;
  98;
  Indels
  Length
  2312;
  ω,..
  Gaps
   618
  401
  558
  498
   438
  318
  1;
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RESULT 11
AAX16153
ID AAX16
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Best Local Similarity
Matches 316; Conserv
  A method has been developed for isolating neuroblastic cells from a cell population. The method comprises: (a) detecting Sox1 gene expression in the cells; and (b) isolating those cells expressing Sox1. Also described is a method for producing a cell committed to the neuronal lineage, comprising: (a) transfecting a pluripotent stem cell with a genetic construct encoding Sox1 expression; (b) culturing the stem cells to differentiate into neural cells; and (c) isolating those neural cells
  produced. The present sequence represents mouse Sox1 cDNA. Detection of Sox1 expressing cells is important in diagnosing and treating cancers of the nervous system. Neural stem cells are useful for the treatment of neurological disorders, especially for repair of accidentally induced trauma in the CNS or for correction of congenital or pathological diseases of the CNS. A patient with a neurological disorder can act as self-donor. Cells may be isolated from the patient and either sorted to extract neuroblasts, or treated in order to differentiate neuroblasts,
   Sequence 2376 BP; 439 A; 772 C; 745 G; 420 T; 0 other;
  Isolating neuroblastic cells from a population - by detecting the expression of the Soxl gene in the cells and sorting the cells to isolate those cells expressing Soxl
   Disclosure; Page 43-44; 60pp; English.
  WPI; 1999-095759/08
   Lovell-Badge R,
  25-JUN-1997;
  25-JUN-1998;
  07-JAN-1999
  Mus musculus
  Mouse; Sox1; neuronal stem cell gene; neuroblastic cell; nervous system; neurological disorder; ss.
  22-APR-1999
  AAX16153;
  AAX16153 standard; cDNA to mRNA; 2376
  (MEDI-) MEDICAL
   Mouse Sox1 cDNA
   245
   518
  65
  CGGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGGCAGCGGCGCA 184
AGTIGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGC
  AGATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCG
  CGGGGGGGCGGCGGCAACTCCACCGCGGCGGCGGCGGCGGCAACCAGAAAAAACAGCC
   specific or general precursors.
   Conservative
   97GB-0013469
   98WO-GB01862
   RES COUNCIL
   Pevny LH,
  52.3%;
77.6%;
   0;
   Smith
   Score 261.4; DB 20;
Pred. No. 2e-45;
0; Mismatches 91;
   A;
   Indels
  Length
   cancer;
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  Gaps
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           The invention relates to nucleic acids and encoded polypeptides which are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions characterised by the expression of one or more cancer associated antigens. The polypeptide is used to treat a disorder characterised by expression of a hCAAP, and determine regression, progression or onset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head and neck, or transitional cancer, leimyosarcoma or synovial sarcoma. The present sequence is a small cell lung cancer associated gene designated as NY-SCIC-9, encoding human SOX3 protein.
  Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer leimyosarcoma; synovial sarcoma; cytostatic; SOX3; ds.
   Homo sapiens
  Human small cell lung cancer associated gene,
   24-SEP-2001
  AAD11118 standard; DNA;
  Claim
   Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encoded by isolated nucleic acid comprising an NA Group 3 or 4 molecule -
  P-PSDB; AAE05813
   Stockert E, Scanlan MJ,
  (LUDW-) LUDWIG INST CANCER RES. (SLOK ) SLOAN KETTERING INST CANCER (CORR ) CORNELL RES FOUND INC.
  21-JAN-2000; 2000US-0489101.
  19-JAN-2001; 2001WO-US02015
  26-JUL-2001
  WO200153349-A2
   425
   818
  305
  GAGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACCAAGA 364
   AGTGGAAGGTCATGTCCGAGGCCGAGAAGCGGCCGTTCATCGACGAGGCCCAAGAGACTGC
   GCGGCGGCGGCCGTGGCCATGGGTGTGGGCGTGGGCGTCGGGGCG
   GCATGGCGAGCGGGGTCGGGGTGGGCGCCGGGCGTG
   CGCTCATGAAGAAGGATAAGTACACGCTGCCCGGCGGGCTGCTGGCCCCCGGCGGCAATA 424
   GCGCGCTGCACATGAAGGAACACCCGGATTACAAGTACCGGCCGCGCGCAAGACCAAGA
  2001-457597/49
   57; Page 98-99; 152pp; English.
   (first entry)
   /*tag= a
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  Location/Qualifiers 441..1773
  2509
  "Human SOX3
   Jager D,
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  protein"
   Ľ,
   transitional cancer; SOX3; ds.
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RESULT 13
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   Matches
   Sequence 2509 BP; 456 A; 818 C; 757 G; 478 T; 0 other;
  1219
  1099
                 (LUDW-)
(SLOK )
(CORR )
  Human; small cell lung cancer; therapy; hCAAP; nucleic acid; NA; melanoma; cancer; colon; breast; head; neck; transitional cancer leimyosarcoma; synovial sarcoma; cytostatic; SOX21; ds.
   CDS
  Human small cell lung cancer associated gene, SOX21.
  24-SEP-2001
   AAD11119;
  AAD11119 standard;
  Homo
   859
Stockert E,
   21-JAN-2000; 2000US-0489101.
  19-JAN-2001; 2001WO-US02015
   WO200153349-A2
   979
  196
   136
   799
  26-JUL-2001
   487
   316
  76
   Local Similarity
es 318; Conserv
   AAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGCAAGATGGCCCAG 195
  ATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGGGGAAAACCAAGACGCTCATGAAG 375
  TTGTCGGAGACGGAGAGCGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGCGCTGCAC 315
   AAACGGCCCATGAACGCCTTCATGGTATGGTCCCGCGGGGAGCGGCGAAAATGGCCCTG
  GGCGGCGGCAGCAGCGGTGCGAGCGGAGGTGGCGGGGGTACAGACCAGGACCGTGTG 858
  GGCGGCAACTCCACCGCGGCGGCGGCCGGCCGCCAACCAGAAAAAACAGCCCGGGACCGCGTC 135
  AAGGATAAGTACACGCTGCCCGGCGGGCGCTGCTGCTGCCCCCGGCGCAATAGCATGGCGAGC
  sapiens
  ACGTACACGCACGT 1232
  AGTTACGCGCACAT 500
  GGGGTCGGG-----GTGGGCGCCCGGCCTGGGCGCGGGCGTGAACCAGCGCATGGAC 486
   AAAGATAAGTACTCCCTGCCCAGCGGCCTCCTGCCTCCCGGTGCCGCCGCCGCCGCCGCC
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SLOAN KETTERING INST CANCER
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   8372
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  "Human SOX21 protein"
   0;
  Score 234.8; DB 22;
Pred. No. 6.5e-40;
0; Mismatches 107;
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  01d LJ,
  Gure
   transitional cancer,
   Indels
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   Length
   Chen
   9
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   Gaps
   918
   1098
   1218
  1158
  435
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RESULT 14
AAS87738
ID AAS87
XX
AC AAS87
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DT 13-FE
XX
DE DNA 6
   Дb
   50
  Вþ
  Qy
   Вþ
  QΥ
   Вb
   QΥ
  B
  Qy
   Дb
   Qγ
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  Matches
  Query Match
         DNA encoding novel human diagnostic protein #23542.
   1542
  are cancer associated antigens expressed in patients afflicted with small cell lung cancer. The molecules provided by the invention can be used in the diagnosis, monitoring, research or treatment of conditions antigens. The polypeptide is used to treat a disorder characterised by expression of an CAAP, and determine regression, progression or oneset of a condition characterised by expression of an abnormal amount of a protein encoded by a nucleic acid (NA) Group 1 molecule. The disorders are small and non-small cell lung cancer, melanoma, colon, breast, head the present sequence is a small cell lung cancer associated gene
   13-FEB-2002
   AAS87738 standard; cDNA;
   1362
   1182
   1242
  1122
  Sequence 8372 BP; 1996 A; 2143 C; 2104 G; 2124 T;
   Isolated polypeptide, used to treat or prognose a disorder characterized by expression of a hCAAP e.g. cancer, is encode isolated nucleic acid comprising an NA Group 3 or 4 molecule
  WPI; 2001-457597/49
P-PSDB; AAE05814.
  187
  designated as NY-SCLC-10, encoding human SOX21 protein.
  247
   127
   67 GGGGGGGGGGGGAACTCCACCGCGGGGGGGGGGGCAACCAGAAAAAACAGCCCG 126
  Local Similarity
   GACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGCTCCCGCGGGCAGCGGGCAAG 186
   GTGCCTGAGTCGC
  GACAGTTACGCGC
  TGGAAACTTTTGTCGGAGACGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGA 306
   AGCATGGCGAGCGGGGTCGGGTGGGGCGCCGGCCTGGGCGCGTGAACCAGCGCATG 483
  CTCCTCAAGAAGGACAAGTTCGCCTTCCCGGTGCCCTACGGCCTGGGCGGCGTGGCGGAC
  CTCATGAAGAAGGATAAGTACACGCTGCCCG---GCGGGCTGCTGGCCCCCGGCGGCAAT
  GCCATGCACATGAAGGAGCACCCCGACTACAAGTACCGGCCGCGGCGCAAGCCCCAAGACG
  GCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAAACCAAGACG
  ATGGCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCTTGGGCGCCGAG
  ATGCCCCAGGAGAACCCCAAGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCGAG
  GAGGGCCCGGGCGGCGGCGGCAGCCGCGGCAGGGCGAGAGCATGTCCAAGCCGGTG
   TGGAAACTGCTCACAGAGTCGGAGAAGCGGCCGTTCATCGACGAGGCCCAAGCGTCTACGC
   Page 100-105; 152pp; English.
   Conservative
  (first entry)
   relates
  496
   1554
  45.0%;
71.6%;
   to nucleic acids and encoded
   0;
  Score 225;
Pred. No. 7.
   Mismatches
  DB 22;
7.5e-38;
   120;
   Length 8372;
  Indels
  5 other;
  polypeptides which
   is encoded by an
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   246
   1241
   1181
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   CC polypeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CC and gene mapping, and in recombinant production of (II). The CC and gene mapping, and in recombinant production of (II). The CC constore normal activity of (II) is useful in gene therapy techniques CC (II). (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as CC a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. CC The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations CC and to produce other types of data and products dependent on DNA and CC amino acid sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of the invention.

CC Note: The sequence data for this patent did not appear in the printed constitution, but was obtained in electronic format directly from WIPO CC at fits. Wipo.int/pub/published_pct_sequences.
  Matches
  Query Match
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  New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess had assess
   Sequence
   The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes.
   Claim 1; SEQ ID No 23542; 103pp; English.
   Drmanac RT, Liu C,
  31-MAR-2000; 2000US-0540217
23-AUG-2000; 2000US-0649167
  30-MAR-2001; 2001WO-US08631
  Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
  733
  (HYSE-) HYSEQ INC.
   11-OCT-2001.
  Homo sapiens.
   87
  27
  Local Similarity es 334; Conserv
AGATGCACAACTCGGAGATCAGCAAGCGCCTGGGCGCCGAGTGGAAACTTTTGTCGGAGA
   CACCGCGGCGGCGGCCGGCCAACCAGAAAAAACAGCCCGGACCGCGTCAAGCGGCCC-A 145
  TGAATGCCTTCATGGTGGTGCCCGCGGGCAGCGGCGCAAGATGGCCCCAGGAGAACCCCCA
   AGCGGTGGTGCGAGCGGAGGTGGCGGGGGTACAGACCCAGGACCGTGTGAAACGGCCCAA
  GGAGGCGCAGGCAAGAGTAGTGCGAACGCAGCCGGCGCGCGAACTCGGGCGGCGCAGC 792
  TGAACGCCTTCATGGTGTGGTCCCGCGGGCAGCGCGCAAAATGGCCCCGGAGAACCCCCA
   2001-639362/73
   ABG23551
   2378 BP; 590 A; 708 C; 664 G; 416 T; 0 other;
  Conservative
  44.08;
   Tang
  0;
  Score 220; DB 23;
Pred. No. 7.5e-37;
0; Mismatches 140;
  DB 23;
7.5e-37;
   Length 2378;
  Indels
  mutations
o assess
  10;
  Gaps
  912
                  265
   852
  86
  2
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Db Db

266 CGGAGAAGCGGCCGTTCATCGACGAGGCTAAGCGGCTGCGAGCGCTGCACATGAAGGAGC

972 325

AGATGCACAATTCTGAGATCAGCAAGCGCTTGGGCCCCGACTGGAAACTGCTGACCGACG

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RESULT 15
AAS61625
ID AAS61
XX AAS61
XX AAS61
XX AAS61
XX Lung
XX Lung
XX Human
XX Human
XX Homo
XX Homo
XX Homo
XX Homo
PN WO200
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                  The invention relates to novel isolated lung small cell cancer antigen polynucleotides (I) and polypeptides (II) used in a method of detecting cancer in a patient. The method is optionally performed by utilising oligonucleotides (III), where the biological sample from the patient is contacted with (III), detecting the amount of polynucleotide hybridised to (III) in the sample and comparing the amount of polynucleotide to a predetermined cut-off value and thereby determining cancer in a patient. (I), (II) or antigen-presenting cells expressing (II) is useful for stimulating and/or expanding T cells specific for a tumour protein. The method comprises contacting T cells with one of the components under conditions to permit the stimulation and/or expansion of the cells. A composition comprising (I) is useful for a stimulation comprises contacting T cells with one of the components under conditions to permit the stimulation and/or expansion of the cells. A composition comprising (I) is useful for the cells.
  11-APR-2000; 2000US-196780P.
21-JUN-2000; 2000US-213361P.
01-SEP-2000; 2000US-229763P.
05-SEP-2000; 2000US-230629P.
   1153
   1093
  1033
  Lodes
  (CORI-) CORIXA CORP.
  08-JAN-2001;
   14-SEP-2000;
19-DEC-2000;
  11-APR-2001; 2001WO-US11859
  18-OCT-2001.
  WO200177168-A2
   Homo sapiens
  Human; cytostatic; antitumour; lung small cell cancer antigen;
tumour; lung cancer; ss.
  Lung small cell carcinoma antigen, cDNA #166.
  29-JAN-2002
   AAS61625 standard; cDNA; 412
  1213 ACGT 1216
   497
   973
  tumour polynucleotide and nosis of cancer especially
   CGAGAAGCGACCATTCATCGACGAGGGCCAAGCGACTTCGCGCCGTGCACATGAAGGAGT
  2002-010896/01.
   ACAT 500
   CCGCAGCCGCTGCCGCCAGCAGTCCGGTGGGCGTGGGCCAGCGCCTGGACACGTACACGC
  ------ GTGGGCGCCGGCCTGGGCGCGGGCGTGAACCAGCGCATGGACAGTTACGCGC
   ACACGCTGCCCGGCGGCTGCTGGCCCCCGGCGATAGCATGGCGAGCGGGGTCGGG- 444
   ACCCGGATTATAAATACCGGCCCCGGCGGAAAACCAAGACGCTCATGAAGAAGGATAAGT
  1; Page 180; 295pp; English.
  ž
   Wang T,
   2000US-213361P.
2000US-229763P.
2000US-230629P.
2000US-232565P.
2000US-257037P.
  (first entry)
  2001US-260796P
immune response in a
  Mohamath
   æ
   ВP
  polypeptides useful in 
lung cancer -
  Lung
   Indirias
patient and for
  cancer
   CY;
  therapy
                     (I) is useful for
   r antigen
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   1212
  1152
  1092
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Search completed: October 10, Job time : 92 secs

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  Matches
   development of a cancer especially lung cancer in a patient. An isolated T cell population is useful for removing tumour cells frobiological sample and for inhibiting the development of cancer in patient. AAS61460-AAS61874 represent novel human lung small cell
   Sequence 412 BP; 83 A; 133 C; 144 G; 51 T; 1 other;
   cancer antigen coding sequences of the invention.
                             483
  126 GGACCGCGTCAAGCGGCCCATGAATGCCTTCATGGTGTGGTCCCGCGGGCAGCGGCGGCAA 185
  195
  75
   15 GGACCACGTCAAGCGGCCCATGAACGCCTTCATGGTGTCGCGGGGCTCAGCGGCGCAA 74
   GATGGCCCAGGAGAACCCCCAAGATGCACAACTCCGGAGATCAGCAAGCGCCTGGGCGCCGA 245
GGTGCCTGAGTCGC
                           GGACAGTTACGCGC 496
  TAGCATGGCGAGCGGGGTCGGGTGGGCGCGCGCGCGCGGGCGTGAACCAGCGCAT 482
   GCTCATGAAGAAGGATAAGTACACGCTGCCCG----GCGGGCTGCCTGGCCCCCGGCGGCAA 422
  AGCGCTGCACATGAAGGAGCACCCGGATTATAAATACCGGCCCCGGCGGAAAACCAAGAC
  GATGGCCCAGGAGAACCCCCAAGATGCACAACTCGGAGATCAGCAAGCGCTTGGGCGCCGA
  GCTGCTCAAGAAGGACAAGTTCGCCTTCCCCGGTGCCCTACGGCCTGGGCGGCGTGGCGGA
  283;
  Similarity
  Conservative
388
  43.6%;
75.7%;
  0;
   Score 217.8; DB 2
Pred. No. 1.9e-36;
  Mismatches
   DB 24;
  88;
  Indels
  Length
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   Gaps
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  365
  134
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